
DIR28S2\1039

Embedding Sustainable Pollination Management into Nepalese Agricultural Systems

Pollinator declines negatively impact people's livelihoods and health, as crop yields decrease, and micronutrients found in pollinator-dependent crops are lost from the diet. Working in Nepal, we aim to reverse these trends by integrating pollinator conservation and management into mainstream agricultural policy and practice. We have the data to design a Pollinator Stewardship Scheme – we now want to apply our evidence-base through outreach, training, demonstration, capacity-building and policy change to achieve lasting impact for people and pollinators in Nepal

Section 1 - Contact Details

PRIMARY APPLICANT DETAILS

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GMS ORGANISATION

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Section 2 - Title, Ecosystems, Approaches & Summary

Q3. Title:

Embedding Sustainable Pollination Management into Nepalese Agricultural Systems

What was your Stage 1 reference number? e.g. DIR28S1\1123

DIR28S1\1320

Q4. Key Ecosystems, Approaches and Threats

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

Biome 1

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

Biome 2

Savannas and grasslands

Biome 3

Polar-alpine

Conservation Action 1

Education & awareness (incl. training)

Conservation Action 2

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

Conservation Action 3

Law & policy (legislation, regulations, standards, codes, enforcement)

Threat 1

Agriculture & aquaculture (incl. plantations)

Threat 2

Climate change & severe weather

Threat 3

Pollution (domestic, commercial, agricultural)

Q5. Summary

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 the website.

Please write this summary for a non-technical audience.

Pollinator declines negatively impact people's livelihoods and health, as crop yields decrease, and micronutrients found in pollinator-dependent crops are lost from the diet. Working in Nepal, we aim to reverse these trends by integrating pollinator conservation and management into mainstream agricultural policy and practice. We have the data to design a Pollinator Stewardship Scheme – we now want to apply our evidence-base through outreach, training, demonstration, capacity-building and policy change to achieve lasting impact for people and pollinators in Nepal

Section 3 - Title, Dates & Budget Summary**Q6. Country(ies)**

Which eligible host 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 Nepal
1

Country *No Response*
2

Country *No Response*
3

Country *No Response*
4

Do you require more fields?

No

Q7. Project dates

Start date:

01 June 2022

End date:

30 November 2024

Duration (e.g. 2 years, 3 months):

2 years, 6 months

Q8. Budget summary

Year:	2022/23	2023/24	2024/25	Total request
Amount:	£108,020.00	£161,704.00	£105,064.00	£ 374,788.00

Q9. Proportion of Darwin Initiative budget expected to be expended in eligible countries: %

Q10a. Do you have matched funding arrangements?

Yes

What matched funding arrangements are proposed?

██████ co-funding confirmed from Bristol Centre for Agricultural Innovation to fund the establishment of the Digital Crop pollinator Library and the demonstration farms in Jumla (see Methods in Q.13 for more details)

██████ of in-kind co-funding from the University of Bristol through 1) waiving the cost of project leader Memmott's time (██████ - ██████) and 2) FEC/overhead savings of ██████ as overheads are only claimed at ██████ on the single costed salary from the UK.

Q10b. Total confirmed & unconfirmed matched funding (£)

Q10c. If you have a significant amount of unconfirmed matched funding, please clarify how you fund the project if you don't manage to secure this?

No Response

Section 4 - Problem statement

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?

Please cite the evidence you are using to support your assessment of the problem (references can be listed in your additional attached PDF document which can be uploaded at the bottom of the methodology page).

Pollinators enhance the production of 75% of world crops, including many economically and nutritionally important fruits, vegetables, and seeds (Klein et al. 2007). Smallholder farmers in the developing world are disproportionately reliant on insect-pollinated crops for their livelihoods (Timberlake & Morgan 2018) and for key dietary micronutrients such as vitamin A and folate (Smith et al. 2015). However, agricultural intensification, habitat loss and climate change are driving declines in pollinators worldwide (Potts et al. 2016), including in Nepal (Partap et al. 2012). Nepal has a diverse pollinator fauna including one of the richest bumblebee assemblages in the world (Williams et al. 2010), four out of seven honeybee (*Apis* spp.) species (Devkota 2020), and 676 butterfly species.

Little is known about the conservation status of individual pollinator species in Nepal, but rapid agricultural intensification and increasing pesticide use, combined with major crop yield losses from insufficient pollination, point towards widespread pollinator declines (Bhusal 2020). Furthermore, research by project partner Kedar Devkota shows that Nepal's economic reliance on crop pollination has increased five-fold in the last decade, reaching US\$477 million annually. In addition to economic impacts, pollinator declines in Nepal are predicted to cause the loss of 26,000 years of healthy life each year as a result of malnutrition-related illnesses (Smith et al. 2015). It is very clear that if pollinator declines continue, levels of poverty and malnutrition in Nepal will worsen, further exacerbating the existing pressures on natural resources and biodiversity.

Fortunately, pollinator declines can be reversed through changes in farmland management practices (e.g., Blaauw & Isaacs 2014). Pollination is one of the simplest, lowest-cost agricultural inputs to control and particularly benefits nutritious, high-value crops. Smallholder farmers in Nepal are often unaware of the importance of pollinators, but if provided with the knowledge needed for pollination management, they could increase their crop yields and simultaneously benefit biodiversity.

Our project is based in Karnali Province, much of which comprises the threatened Western Himalayan Alpine Shrub and Meadows ecoregion. Karnali is the largest and poorest province of Nepal, with only 23% of the population classified as food secure (UNDP 2020). Many crops in this region (e.g., apples, beans and pumpkins) are highly pollinator-dependent and reliant on a range of native flies (primarily *Eristalis* spp.), solitary bees (primarily Halictidae), bumblebees (*Bombus* spp.), and most importantly, the native honeybee *Apis cerana* which has been reported declining in this region (Theisen-Jones & Bienefeld 2016). There is strong political will from the provincial and national-level government to promote biodiversity-friendly farming practices. However, various barriers including a lack of farmer awareness, a lack of capacity and no evidence to inform policy, prevent this political will from translating into meaningful outputs for farmers on the ground.

Working with partners in Nepal and drawing on an evidence-base from our ongoing pollination project, this Darwin project will raise awareness of pollination, increase the capacity of individuals and institutions to research and manage pollination services, and facilitate the design of policies to conserve and enhance pollinator biodiversity in Nepal.

Section 5 - Darwin Objectives and Conventions

Q12. Biodiversity Conventions, Treaties and Agreements

Q12a. Your project must support the commitments 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.

- Convention on Biological Diversity (CBD)
- United Nations Framework Convention on Climate Change (UNFCCC)
- Global Goals for Sustainable Development (SDGs)

Q12b. National and International Policy Alignment

Please detail how your project will contribute to national policy (including NBSAPs, NDCs, NAP etc.) and in turn international biodiversity and development conventions, treaties and agreements that the country is a signatory of.

PROVINCIAL LEVEL: Project partners, the Ministry of Land Management, Agriculture and Cooperatives (MoLMAC), Karnali Province, prioritise organically-oriented sustainable farming practices as one of their core development agendas and have

instigated organic agriculture law and guidelines. To achieve these aims, they have requested technical guidance and support from project partners LI-BIRD, FAO and the Agriculture and Forestry University (AFU), as well as our project team (see attached letter of support). In response to this request, we will assist in devising an evidence-based strategy to support pollinators and increase the capacity of the provincial Ministry and other local institutions to conduct research and training in pollination service management.

NATIONAL LEVEL: Nepal's Ministry for Agriculture and Livestock Development emphasises sustainable biodiversity-friendly farming practices in its Agriculture Development Strategy (Government of Nepal 2015) and works closely with our project partners in achieving this. A key priority in the Government of Nepal's NBSAP (2014), is the expansion of organic agriculture and Integrated-Pest-Management to meet Aichi Targets 7 (areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity) and 14 (ecosystems that provide essential services and contribute to health, livelihoods and well-being, are restored and safeguarded). The importance of pollination management is recognised in these policy frameworks and aligns with their strategic goals. However, there is currently no national policy strategy to conserve and enhance pollination services. This Darwin Project will enhance pollination services, build capacity and facilitate a policy framework for integrating pollinator conservation and management into national biodiversity and agriculture development strategies. Moreover, we will increase the resilience of crop pollination services to climate change, in line with Nepal's Climate Adaptation Plan (Government of Nepal 2018).

INTERNATIONAL LEVEL: Nepal is a partner of the FAO's Global Pollination Project and a signatory to the Convention on Biological Diversity (CBD). Most relevant to our project, Nepal is committed to Article 14/6 of the CBD: "The conservation and sustainable use of pollinators", which includes the following key targets:

A1.1 Develop and implement policies to safeguard and promote wild and managed pollinators > the core aim of Project Output 3.

A2.1 Implement pollinator-friendly practices in farms and grasslands > the aim of our Pollinator Stewardship Scheme.

A.3.1 Raise public awareness on the value of pollinators for health, wellbeing and livelihoods > achieved through awareness program in Output 1.

A4.1 Monitor and assess the status and trends of pollinators and... foster relevant research. > Building capacity to research & monitor pollinators is the aim of Output 2.

Our project's CBD-alignment is emphasised in the Letter of Support from the FAO's facilitator of the International Pollinator Initiative, Dr Abram Bicksler (see attached)

Our project also contributes to the following UN Sustainable Development Goal targets in Nepal:

2.1 end hunger and ensure access by all people...to safe, nutritious and sufficient food

2.4 ensure sustainable food production systems and resilient agricultural practices...that help maintain ecosystems and strengthen capacity for adaptation to climate change

15.9 integrate ecosystem and biodiversity values into national and local planning and poverty reduction strategies...

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

Q13. Methodology

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

- How you have 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.
- How you will undertake the work (materials and methods).
- How you will manage the work (roles and responsibilities, project management tools, etc.).

PREVIOUS ACTIVITIES:

This proposal draws upon the lessons and evidence-base of our ongoing £1.08M research project in Nepal (2020-2022) investigating the nutritional and economic reliance of smallholder farmers on insect pollinators in Jumla District, Karnali Province. This successful project has produced detailed livelihood and dietary intake data from 750 households in 10 different villages and >11,000 plant-pollinator interactions from these same locations. This allows us to identify: 1) which pollinator-dependent crops provide key micronutrients and income to farming families 2) which insects are responsible for

pollinating these crops and the wild plants they rely upon; and 3) how to manage these pollinator communities to improve crop yields and resilience to climate change. We now want to apply this evidence-base through a Darwin Initiative project to achieve long-term positive outcomes for biodiversity, human health, and livelihoods.

JUSTIFICATION FOR APPROACH:

From our ongoing project, we have learnt that there are three fundamental barriers to the uptake of pollinator-friendly farming practices: 1) a lack of pollinator awareness by farmers; 2) a lack of institutional capacity to improve the management of pollinators via research, extension work or training; and 3) the lack of any coordinated policy strategy for pollinators. All three barriers are addressed in our approach outlined below.

METHODOLOGY:

Output 1) Pollinator awareness and stewardship program in Jumla district to increase public understanding of pollinators and demonstrate evidence-based pollination-management practices.

Methods: We will run 100 pollinator, biodiversity & nutrition awareness classes in Jumla District, reaching c. 3000 key stakeholders (primarily farmers), with separate women-only sessions. Three pollinator-friendly demonstration farms will be established to showcase the Pollinator Stewardship Scheme. Farmer Field School (FFS) sessions will be run on the farms to demonstrate and test management approaches. A pollinator Facebook campaign will raise the profile of pollinators in the region (Facebook is widely used). Regular plant and pollinator surveys and household questionnaires (using a tried-and-tested approach from our ongoing project) will monitor the biodiversity and poverty alleviation outcomes of project activities and provide an evidence base for the effectiveness of the Pollinator Stewardship Scheme, which we aim to publish.

Output 2) Pollinator capacity-building programme to equip individuals and institutions with the knowledge, resources and tools to identify, research and manage crop pollinators, enabling them to train and advise others.

Methods: We will deliver 7 training courses to 175 agricultural officers, researchers and extension workers from Karnali Province, building capacity in pollinator taxonomy, research and management. A pollination management handbook and training package will be produced and distributed for use in training programs across Nepal. We will establish an online Digital Crop Pollination Library for Nepal which details each crop's pollinator-dependence, its nutritional and economic value, key pollinators (plus taxonomic information) and guidance for enhancing its pollination. This long-term resource will be hosted on the website of our project partners, Agriculture and Forestry University (see letter of support from the AFU Vice-Chancellor) and provide the definitive source of data on pollinators in Nepal and the wider Himalayan region.

Output 3) Pollinator Action Plan for Karnali province to embed pollinator conservation and management into provincial policy, advocating this as a blueprint for a National Pollinator Strategy for Nepal

Methods: Project partners LI-BIRD will establish a steering committee of high-level stakeholders from across the province under the leadership of Karnali Ministry (see Ministry letter of support). Partners in the Ministry will oversee a technical working group of experts who will formulate policy solutions for conserving and enhancing pollination services. Based on this, we will publish a policy-prescriptive Pollinator Action Plan for Karnali Province and promote its widespread uptake through advocacy work. The Pollinator Action Plan will be presented to national government officials and stakeholders, promoting it as a blueprint for a National Pollinator Strategy for Nepal. We will also publish an open-access team paper that quantifies the economic and nutritional value of pollination services in Nepal, providing a strong policy leverage tool.

PROJECT & DATA MANAGEMENT:

Project Leader Jane Memmott and Project Coordinator Tom Timberlake are responsible for overall project management, M&E, data management, and reporting. In addition, there will be strong participation by all partners and stakeholders via a Project Advisory Committee to provide strategic guidance and ensure input and engagement from all stakeholders. The implementation of Project Output 1 will be led by HERD whilst Project Outputs 2&3 will be led by LI-BIRD. All project data will be stored on the University of Bristol's Research Data Storage Facility and anonymised data (following GDPR) made publicly available through open-access publications and upload to the Digital Pollination Library.

Q14. Capability and Capacity

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

Capacity building is the core focus of Output 2 and will take place at three levels:

INDIVIDUAL LEVEL: a 5-day 'Training of the Trainers' (ToT) course for the 13 field staff will build in-depth knowledge of

pollinator ecology and management, human nutrition, surveying techniques, and teaching approaches. The ToT curriculum will be based on pollination courses we have run in our ongoing project in Nepal which received excellent feedback and led to a highly effective and ecologically-inspired team. For the construction of the Digital Pollination Library, we will train and fund 10 Nepali masters-students to collect the data needed for the library.

INSTITUTIONAL LEVEL: we will deliver seven capacity-building workshops across Karnali Province for extension workers, agricultural officers & researchers to build capacity in pollination taxonomy, research and management, enabling them to train and advise others. We will produce and distribute 500 copies of a pollination management handbook, a pollinator biodiversity catalogue, and a pollinator awareness video to serve as a training/education resource. All digital and hard-copy resources, as well as fieldwork and technological equipment will remain in-country with partner organisations.

NATIONAL LEVEL: the Digital Pollination Library will serve as a long-term national resource and a hub of all pollinator information in Nepal. By providing a free and accessible source of information on pollination, this resource will facilitate future research and development/conservation projects in Nepal. Project partner, the Agriculture and Forestry University (AFU) will host the resource on their University website and continue to update it with new information, ensuring it remains relevant in the long term. In partnership with the Karnali Ministry and other stakeholders, we will produce a Pollinator Action Plan for Karnali Province which will serve as a blueprint for a National Pollinator Strategy – a long-term goal of the project.

Q15. Gender equality

All applicants must consider whether and how their project will contribute to reducing inequality between persons of different gender. Explain how your understanding of gender equality within the context your project, and how is it reflected in your plans.

Karnali Province has the highest Gender Inequality Index in Nepal, with low rates of female education, high rates of malnutrition and few women in positions of power (UNDP 2020). With seasonal out-migration of many men in search of jobs, women have an important role in agricultural activities and stand to lose the most income if pollinators decline. Furthermore, vitamin A and folate (which are most vulnerable to pollinator declines as they are largely derived from pollinator-dependent crops) are particularly important to the health and development of women and young children. Disproportionately at risk, women have a key stake in this project. However, women in this region face substantial challenges in obtaining, articulating, and acting upon agricultural knowledge, which both disadvantages them and their families and threatens the success of sustainable development initiatives.

We will address this power and knowledge imbalance by ensuring female farmers and women's groups are well represented in our outreach program. We will hold women-only events including a series of participatory workshops with women's groups and key female stakeholders across Karnali Province to gather their views and suggestions. The proceedings from these workshops will feed into the design of the provincial Pollinator Action Plan and key women from these meetings will be represented in the policy steering committee. The demonstration farms will be led and run by women, providing employment and training, and empowering them as local role-models.

Our main implementation partners, HERD and LI-BIRD, have robust Gender Equality and Social Inclusion policies and have worked on gender issues across Nepal, therefore have an in-depth understanding of the complex cultural factors at-play. Our project is led overall by a woman, and we will aim for 50% female project staff.

Q16. Awareness and understanding

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

Project Output 1 will raise public awareness of the value of pollinators and wider biodiversity and build an understanding of how it benefits human health and livelihoods. This will be achieved through four approaches:

1) Delivery of pollinator, biodiversity and nutrition awareness classes to farmers, women's groups, schools, community forest user groups and municipality offices. Eight field-level facilitators will deliver these classes in Jumla district, reaching 3000 people. Class formats will be tailored to the audience and include activities such as an educational video shown on a

Pico projector, a pollinator art class, an outdoor pollinator survey and an interactive discussion session. Participant understanding will be tested through an interactive quiz after each class.

2) Three demonstration farms managed using a pollinator-friendly approach will be established in Jumla District. These will showcase the benefits of pollination management to a range of stakeholders including farmers, women's groups, district officials and high-level provincial policymakers who will visit during a travelling seminar. The female agricultural technicians will run the farms and use them as a venue to deliver Farmer Field School sessions, training courses and pollination experiments. Follow-up surveys will assess the degree of understanding and uptake of management practices.

3) A pollinator Facebook campaign in Karnali Province (modelled on previous successful campaigns in this region) will boost understanding, engagement and appreciation for pollinators and other biodiversity. Members will be encouraged to share pictures, pollinator-themed art and we will share management tips and project resources, using Facebook metrics as a measure of engagement.

4) A team-authored publication (and accompanying lay-terms leaflet) will quantify the economic and nutritional value of pollination services in Nepal. We aim to publish in an open-access journal, making data publicly available, and use it to build awareness of the role of biodiversity in safeguarding livelihoods and health.

Q17. Change expected

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

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

SHORT TERM:

- 1) 3000 individuals (50% women) in Jumla District benefit from an improved understanding of the value of pollinators, thereby increasing conservation buy-in and reducing environmentally harmful practices including excessive pesticide application, habitat clearance and overgrazing.
- 2) 1500 women farmers, NGO workers, agricultural technicians and community leaders empowered to speak about and act upon their environmental knowledge, providing them with a platform for their views to be incorporated into policy.
- 3) Uptake of the Pollinator Stewardship Scheme by 1000 smallholder farmers (>40% women), leading to a 15% increase in the abundance and diversity of wild plants and pollinating insects and a 10% increase in the yield of pollinator-dependent crops.
- 4) Household income from the sale of pollinator dependent cash crops (e.g., apples & beans) on 1000 participating farms increases 10% by project end, whilst the dietary diversity of these families increases 5%.
- 5) Reproductive success (seed set) of pollinator-dependent Himalayan alpine shrub and meadow flora e.g., *Rosa sericea*, *Berberis aristata*, *Spiraea canescens*, increases by 10% on 1000 participating farms.
- 5) 175 extension workers, district agriculture officers and researchers (>30% women) from across Karnali Province are provided with the knowledge, resources and capacity to conduct pollinator monitoring, research and training. Course content subsequently delivered by them and others to 3,000 farmers/students.
- 6) Pollinator-friendly policies are incorporated into provincial-level policy strategy and become a component of the provincial government's agriculture and development agenda. Pollination management practices incorporated into standard issue training manual for new extension workers in Karnali province.
- 7) The Digital Pollination Library enhances the taxonomic capacity and knowledge-base of at least 500 agriculture/biodiversity researchers and practitioners in Nepal.

LONG TERM:

- 1) Pollinator (and wider biodiversity) knowledge and awareness continues to spread across Karnali Province resulting in uptake of the Pollinator Stewardship Scheme by up to 10,000 farming households. As a result, the yield and quality of economically and nutritionally important crops continues to increase, resulting in greater household income and an increased probability of dietary adequacy for thousands of smallholder families.
- 2) With the implementation of more sustainable, biodiversity-friendly farming practices, agriculture becomes more climate-resilient, resulting in fewer yield fluctuations and crop failures.
- 3) New policies and management practices resulting from the project increase pollinator abundance and diversity in

Karnali Province leading to more resilient native habitats and plant communities, particularly in the threatened Western Himalayan Alpine Shrub and Meadows ecoregion.

4) The views and expertise of thousands of women are incorporated into provincial environmental/agricultural policy, removing some of the cultural barriers to their participation in decision-making.

5) The skills, resources and capacity developed by the project are used to train and advise tens of thousands of other farmers, students and agricultural/conservation practitioners across the country.

6) Digital Pollination Library is used by researchers, practitioners and policy-makers and stimulates further pollination research in Nepal.

7) Provincial-level project outputs serve as a flagship case-study and are ultimately scaled to a national level to establish a National Pollinator Strategy for Nepal.

Q18. Pathway to change

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

We have the evidence-base from our successful ongoing project to protect pollinators and improve pollination services in Nepal. Moreover, the political will exists to support sustainable pollination management. Currently though, farmer awareness of pollination services is lacking, as is the institutional capacity to provide training, research and monitoring and clear policies to protect pollinators.

At a district level, we will raise awareness of pollination services, leading to uptake of biodiversity-friendly practices by farmers and other stakeholders. We will build capacity at provincial and national levels, providing the training, information, and tools to replicate project activities across the province and beyond. Finally, we will support the Karnali government, as requested, by developing a provincial Pollinator Action Plan, ensuring progress is embedded into policy, this providing a blueprint for a National Pollinator Strategy.

By raising awareness of individuals, building capacity of institutions, and integrating changes into a policy framework, we will embed pollinator conservation and management into mainstream agriculture in Nepal, helping to fulfil its obligations under the CBD and contributing to its NBSAP. This will ultimately lead to biodiversity benefits across the country and increased yields of pollinator-dependent crops, resulting in long-term livelihood and health benefits for local people.

Q19. Exit Strategy

How the project will reach a sustainable point and continue to deliver benefits post-funding? Will the activities require funding and support from other sources, or will they be mainstreamed in to "business as usual"? How will the required knowledge and skills remain available to sustain the benefits? How will your approach, if proven, be scaled?

All project activities have been designed with long-term sustainability in mind to ensure they continue delivering benefits to the people and biodiversity of Nepal after funding has ended. This will be achieved through three main strategies:





PARTNERSHIP: Strong in-country partnerships are key to ensuring project sustainability. All project activities have been co-designed and co-driven by partners in Nepal. For example, the Agriculture and Forestry University (AFU) will host the Digital Pollination Library on their website and cover the ongoing costs of maintenance and upkeep (see letter of support from The Vice Chancellor of AFU), the demonstration farms will be co-run by partners NARC in Jumla who will continue using them for research and demonstration after the project, and our partners in Karnali Ministry will lead the implementation of the Pollinator Action Plan (see letters of support).

MAINSTREAMING: We aim to embed pollinator conservation and management into mainstream agricultural policy and practice in Nepal. This will be achieved through the Pollinator Action Plan and its integration into provincial policy, the incorporation of pollination management into training programmes and extension work, and the use of the Digital Pollinator Library in research and agricultural practice across Nepal.

SCALABILITY: The information resources developed by this project are applicable to any region of Nepal as well as the wider Hindu-kush Himalayan region and will be integrated into a generic pollinator training package that can be used by NGOs, schools and training centres throughout Nepal. Likewise, the Pollinator Stewardship Scheme and demonstration farm concept are designed to be scaled to other districts of Nepal once feasibility in Jumla has been demonstrated. Finally, the provincial-level Pollinator Action Plan will provide a blueprint for a National Pollinator Strategy and we will advocate for

its national uptake, using our project as a case study.

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

-  [Darwin map ToC references](#)
-  28/01/2022
-  02:38:45
-  pdf 1.06 MB

Section 7 - Risk Management

Q20. Risk Management

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

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

Risk Description	Impact	Prob.	Gross Risk	Mitigation Header	Residual Risk
<p>Fiduciary</p> <p>Due to weak governance and corruption within Nepal, there is a small risk of funds being: 1) misused (e.g., paying for bribes and non-project activities), 2) used inefficiently, or 3) not comprehensively accounted for, resulting in reduced value for money and reputational damage to the project partners and DI.</p>	Severe	Unlikely	Major	We are working with implementation partners who are well known to us; HERD have already completed the University of Bristol due-diligence process and LI-BIRD are running an existing Darwin project. They have robust financial risk management strategies including anti-corruption policies, regular internal & external audits, procurement policies & staff codes-of-conduct.	Minor
<p>Safeguarding</p> <p>Our target communities are vulnerable (poor, isolated & marginalised), thus there is a risk of local project staff or stakeholders being mistreated (e.g., verbally abused), exploited (e.g., under-paid) or harmed (e.g., physical injury). The impact would be an infringement of human rights, loss of community buy-in and reputational damage.</p>	Unlikely	Severe	Major	All project partners have comprehensive safeguarding policies and require staff to sign a safeguarding code-of-conduct. Project staff will attend a safeguarding session as part of their recruitment and training; the consequences of any misconduct will be clear and they will learn how to recognise & respond to misconduct by others.	Minor

<p>Delivery Chain</p> <p>Our delivery chain involves the transfer of funds to two project implementation partners who will work together and with other partners to implement all field activities. There is a small risk of conflict between partners over the distribution of funds and allocation of responsibility, resulting in disrupted activities.</p>	Unlikely	Moderate	Moderate	<p>Our team has discussed the specific role of each project partner and specified this in a 'Roles & Responsibilities' and 'team structure' document. This was drafted by the entire team and agreed upon by all. Ongoing communication/evaluation will be maintained to ensure all partners remain aware of each other's activities.</p>	Minor
<p>Risk 4</p> <p>Due to low levels of education, geographic isolation and traditional views held by many farmers and other stakeholders in Jumla, there is a risk of limited participation by farmers in project activities. This would reduce our project outcomes, particularly the uptake of the Pollinator Stewardship Scheme & health/livelihood improvements.</p>	Possible	Moderate	Major	<p>Through our ongoing project in Jumla, we have worked closely with farmers and other stakeholders to build trust and partnership – our project partners are now well-known and respected. Most local project staff are trusted members of their communities, able to advise and reassure their peers (i.e., local farmers).</p>	Minor
<p>Risk 5</p> <p>The Covid-19 pandemic is likely to restrict travel within Nepal at times (particularly 2022) and there is a chance of national/regional lockdowns. Whilst they have previously been brief (weeks rather than months), Covid lockdowns could force us to reschedule or cancel face-to-face events such as awareness classes or training sessions.</p>	Likely	Moderate	Major	<p>In our ongoing Nepal project, we have coped very effectively with Covid-restrictions. We maintain regular team contact via Zoom/Whatsapp and numerous training sessions have been held online. Every face-to-face event is designed to be flexible and responsive to new restrictions, which are normally brief. All partners have robust Covid-mitigation strategies.</p>	Major
<p>Risk 6</p> <p>Nepal's geographic location makes it vulnerable to natural disasters, most notably, earthquakes, flooding and landslides. This has the potential to cause harm to project staff and disrupt project activities through the breaking of transport and communication links and the shifting of regional priorities.</p>	Unlikely	Major	Major	<p>Risks will be mitigated through the completion of a comprehensive risk assessment and health and safety protocol for all project staff. Travel during periods of heavy rain will be avoided, project offices/accommodation will be screened for earthquake security and project staff will be trained in first-aid and emergency response.</p>	Minor

Section 8 - Implementation Timetable


Q21. Provide a project implementation timetable that shows the key milestones in project


activities


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

[Implementation Timetable Template](#)

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

 [Project implementation timetable final](#)

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Section 9 - Monitoring and Evaluation

Q22. Monitoring and evaluation (M&E)

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

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

We will employ adaptive management through an iterative and reflective planning process with broad stakeholder participation. The project's M&E system is designed to provide the necessary data and information to measure progress against achieving the project outputs and outcomes and to make informed decisions about ongoing project activities. We will employ both qualitative (focused group discussion, case study, human interest stories etc.,) and quantitative (household survey, key informant interview, biodiversity survey) methods to collect this information. A gender disaggregated database of project activities, beneficiaries, outputs and outcomes will be maintained and updated on a regular basis which will provide important information to analyse and report against progress indicators. Our project will use the following methods and tools to collect data and information:

MONITORING SURVEYS: a baseline survey will be conducted to provide a benchmark for measuring project M&E indicators. The findings of this survey will also be used to refine the project plans. Information/data on each indicator will be collected on a regular basis (half yearly for outputs and annually for outcomes) and reported as part of project progress reporting. Additionally, project staff will monitor and document the notable changes in policy context relating to the project's advocacy activities; these will be included in the project's progress report. We will also conduct an end-line survey to evaluate the key changes brought about by the project interventions.

ACTIVITY > OUTPUT MONITORING: There will be a monthly staff meeting to update the team on project activities and measure progress against each output indicator. In addition, a local-level monitoring visit to field sites will be used to assess whether project activities are leading to the anticipated outputs. Project staff, collaborators (e.g., women's group/cooperative members), government and non-government stakeholders and media personnel will be invited to join the monitoring visits and contribute feedback.

OUTPUT > OUTCOME MONITORING: Annual Review and Planning Meetings with project staff, collaborators and stakeholders will be used to assess whether the project outputs are contributing to achieving anticipated project outcomes. An annual Outcome Monitoring Survey (OMS) will be conducted by the project staff to evaluate the progress under each outcome-level indicator based on which annual reports are prepared.

PUBLIC HEARING & SOCIAL AUDIT: We will conduct a public hearing in the project inception phase to inform beneficiaries and stakeholders about our objectives and actions. An annual social audit will be conducted to ensure value for money is achieved and check for any unintended negative impacts of the project.

M&E MANAGEMENT: Project leader Memmott and Project Coordinator Timberlake will be responsible for overall project M&E including project reporting, financial audits and review of the progress indicator data. However, each implementation partner (HERD & LI-BIRD) will be responsible for the M&E of their own project activities and will feed their data/information into a central project database and report progress & feedback in monthly team meetings. M&E of project Output 1 will be led by HERD Team Leader, Deepak Joshi, whilst Outputs 2 & 3 will be led by LI-BIRD Team Leader, Shree Neupane.

Total project budget for M&E in GBP (this may include Staff, Travel and Subsistence costs)	██████████
Percentage of total project budget set aside for M&E (%)	█
Number of days planned for M&E	130

Section 10 - Logical Framework





Q23. Logical Framework

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

- [Stage 2 Logframe Template](#)

Please complete your full logframe in the separate Word template and upload as a PDF using the file upload below. – **please do not edit the template structure other than adding additional Outputs if needed as a logframe submitted in a different format may make your application ineligible.** Copy your Impact, Outcome and Output statements and your activities below - these should be the same as in your uploaded logframe.

Please upload your logframe as a PDF document.

 [Darwin Stage 2 Logframe final](#)
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Impact:

Pollinator conservation and management embedded into mainstream agricultural policy and practice in Nepal, with long term benefits for people and pollinators

Outcome:

Widespread uptake of an evidence-based strategy for enhancing pollination services in Karnali Province Nepal, leading to increased pollinator biodiversity, increased yields of pollinator dependent crops and improved livelihoods and nutrition

Project Outputs

Output 1:

Pollinator awareness and stewardship program in Jumla district to increase public understanding of pollination services and demonstrate evidence-based pollination-management practices

Output 2:

Pollinator capacity-building program to equip individuals and institutions with the knowledge, resources and tools to identify, research and manage crop pollinators, enabling them to train and advise others

Output 3:

Pollinator Action Plan for Karnali province to embed pollinator conservation & management into provincial policy, advocating this as a blueprint for a National Pollinator Strategy for Nepal

Output 4:

No Response

Output 5:

No Response

Do you require more Output fields?

It is advised to have fewer 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, 1.3 are contributing to Output 1.

OUTPUT 1:

1.1 Recruit field staff and conduct a five-day Training of Trainer (ToT) course for all project staff on agroecosystem services, pollinator biodiversity and management, ecological data collection, teaching methods etc.

1.2 Devise an evidence-based Pollinator Stewardship Scheme for Jumla District, based on data from ongoing pollination project in Jumla. Produce and distribute 3000 booklets outlining the Stewardship Scheme.

1.3 Stakeholder engagement workshops to get buy-in and strategic feedback at start and end of project.

1.4 Establish three demonstration farms showcasing the evidence-based Pollinator Stewardship Scheme through cultivation of high-value pollinator-dependent crops. Establish pollinator friendly habitat and management practices on the farms.

1.5 Run pollinator education/awareness/training classes for a total of 3000 participants from across Jumla District. Promote the Pollinator Stewardship Scheme in these classes and advertise Farmer Field School sessions (see next activity).

1.6 Run weekly Farmer Field School (FFS) style sessions on demonstration farms to showcase and experiment with pollination management practices and traditional beekeeping.

1.7 Establish a Pollinator Facebook group for Karnali Province to boost understanding and appreciation for pollinators and other biodiversity. Members encouraged to share pollinator pictures, pollinator-themed art and we will share conservation/management tips.

1.8 Conduct baseline and follow-up surveys of farms participating in the Pollinator Stewardship Scheme and matched control farms, recording biodiversity and livelihood outcomes. Data used for M&E purposes and published as open-access paper.

1.9 Conduct follow-up surveys of 10% of farmers attending the awareness courses/Farmer Field School sessions (c.200 total) to record rates of Pollinator Stewardship Scheme uptake.

1.10 Nutritional analysis (lab test) of control and treatment crop samples to assess the nutritional value of pollinator-enhanced and unpollinated fruits/vegetables – to be used as a project indicator.

OUTPUT 2:

- 2.1 Produce handbook for managing crop pollination services in Nepal, including information on pollinator dependent crops, key pollinators and pollination management guidance. Distribute to researchers and extension workers across Karnali Province.
- 2.2 Produce a pollinator education/promotion video for mass awareness amongst farmers and frontline extension workers and for use in the pollinator awareness classes.
- 2.3 Deliver seven capacity-building workshops across Karnali Province, enabling participants (extension workers, researchers etc.) to identify, research & monitor key crop pollinators and advise on their management.
- 2.4 Produce and distribute a generic pollinator training package (including lesson plans, pollinator management handbook, outreach materials and video) to 200 institutions in Karnali Province.
- 2.5 Train and employ masters' students from Agriculture and Forestry University (AFU) to photograph and database pollinator specimens and conduct short periods of fieldwork to fill in gaps crop pollination knowledge, for the Digital Pollination Library (see Activity 2.6)
- 2.6 Establish a Digital Pollination Library for Nepal, with details of each crop's pollinator-dependence, its nutritional and economic value, its key pollinators (along with a taxonomic identification resource for each one), and guidance for enhancing its pollination.
- 2.7 Organize a travelling seminar for provincial and district level stakeholders to achieve wider dissemination of project activities & visit the pollinator-friendly demonstration farms to showcase the Pollinator Stewardship Scheme.

OUTPUT 3:

- 3.1 Publish a team-authored, open-access paper quantifying the economic and nutritional value of pollination services in Nepal, providing an evidence base for the value of pollinators to human health and livelihoods.
- 3.2 Form a project steering committee chaired by Secretary of Karnali Ministry of Land Management, Agriculture and Cooperative (MoLMAC) Establish a technical working group to bring policy level officers on-board for drafting the Pollinator Action Plan.
- 3.3 Hold a 2-day provincial-level workshop of experts and stakeholders led by the technical working group to identify policy solutions for conserving and enhancing pollination services.
- 3.4 Draft Pollinator Action Plan and circulate amongst participants for comment.
- 3.5 Publish a policy-prescriptive Pollinator Action Plan for Karnali Province drawing on workshop outputs and the evidence base from our ongoing project in Nepal. Promote widespread uptake through advocacy work.
- 3.6 Hold a 2-day national-level pollination workshop in Kathmandu to propose the concept of a National Pollinator Action Plan for Nepal, using the Karnali Pollinator Action Plan as a flagship/blueprint example.
- 3.7 Publish the national level workshop proceedings, highlighting key policy solutions and action-points for ongoing activities, following project end. Circulate proceedings amongst workshop attendees for feedback.

Section 11 - Budget and Funding

Q24. Budget


Please complete the appropriate Excel spreadsheet, which provides the Budget for this application. Some of the questions earlier and below refer to the information in this spreadsheet. Note that all Darwin Main should be using the over £100,000 template. Please refer to the [Finance Guidance](#) for more information.


- [Budget form for projects over £100k](#)


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


N.B.: 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.

 [Darwin budget final](#)

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Q25. Financial Risk Management

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

Some key financial risks to the successful delivery of our project are outlined below. We have discussed each risk with project partners and University of Bristol (UoB) finance team to agree upon solutions/mitigations.

FRAUD & CORRUPTION: UoB and both implementation partners (HERD & LI-BIRD) have comprehensive anti-corruption/fraud and procurement policies and staff codes-of-conduct. They conduct internal and external audits to ensure financial transparency and have secure Record Management Facilities for storing financial data. HERD have completed the UoB due-diligence process through our ongoing project and LI-BIRD are running an existing Darwin project.

FLUCTUATING EXCHANGE RATES: This risk has been mitigated by assessing long-term trends in foreign exchange and using conservative exchange rates. In the event of large unpredictable shifts in exchange rates, resulting in fewer in-country project funds, we have identified project activities that could be scaled back (with DI approval) whilst avoiding major detriment to project outcomes.

DELAYS: Most key staff appointments have already been identified, ensuring no delay in their recruitment. For other positions, HERD & LI-BIRD have a track record of fast & effective recruitments, drawing on their capacity as dynamic project-oriented organisations. All essential project equipment is available for purchase in Nepal, ensuring no delays.

Q26. Funding

Q26a. Is this a new initiative or does it build on existing work (delivered by anyone and funded through any source)?

- Development of existing work

Please provide details:

This proposal builds upon the work of our ongoing three-year 'Micro-Poll' research project (2020-2022) – a [REDACTED] initiative funded by the Belmont Forum and the Bristol Centre for Agricultural Innovation. The aim of Micro-Poll was to assess the impacts of pollinator losses on human nutrition and livelihoods in Jumla District, Nepal, and to collect a comprehensive dataset on plant-pollinator interactions to provide an evidence-base for sustainable pollination management. We have formed strong partnerships with nutritionists, entomologists, sustainable development NGOs and government bodies in Nepal and now have the experience, the data, the network of partners and the momentum to apply our evidence-base through this Darwin Initiative project.

Aside from our ongoing project, very little work has been done on pollination in Nepal. Many of the previous studies have been carried out by members of the project team and all have focused on either documenting pollinator biodiversity or measuring the pollinator dependence and pollination deficits in key crops. Our work goes beyond this to explicitly link pollination services to human health and livelihoods (e.g., Timberlake et al. 2022) and provide practical recommendations for achieving long-term positive outcomes for people and pollinators in Nepal.

Q26b. Are you aware of any current or future plans for similar work to the proposed project?

No

Q27. Capital items

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

Our project has minimal capital costs as much of the fieldwork equipment will be inherited from our ongoing Micro-Poll project. The few capital items that we do purchase (laptops, camera, printer, basic pollinator fieldwork and taxonomy equipment) will all remain in-country with project partners, for use on future projects. In particular, the fieldwork and taxonomy equipment will provide a valuable long-term asset to project partners.

Q28. 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.

Our project represents excellent value for money for the following reasons:

- 1) We capitalise upon ██████████ of previous project funding, enabling us to achieve far more than would ever be possible with the requested amount. The expensive data collection process has already been completed; a great deal of expensive equipment including pollinator fieldwork and taxonomy kit, motorbikes, survey tablets and office equipment will be co-opted for use in this Darwin project and staff from our Micro-Poll project will be given the option to transfer to this project, likely saving substantial costs due to reduced training and recruitment needs.
- 2) We have secured £██████ of guaranteed co-funding as well as an additional ████████ of in-kind funding, representing over ████████ of the total project budget.
- 3) Strong partnerships in Nepal and a number of long-term project resources such as the pollination training package and Digital Pollination Library mean our project will continue delivering benefits to people and biodiversity after the project ends, this providing additional value for money and a project legacy. For example, the Digital Pollination Library will be maintained and expanded by project partners, AFU, after the project ends.
- 4) Project implementation partners in Nepal (HERD and LI-BIRD) both have robust cost-efficiency systems built into their budgeting and operations. For example, their procurement policies include comprehensive supplier vetting and competitive bidding, they have a rigorous internal auditing program and an institutionalised fund-flow-analysis (FFA) tool for checking that invested resources are reaching the intended target groups.

Section 12 - Safeguarding and Ethics

Q29. Safeguarding

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

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

Please upload the lead partner's Safeguarding Policy as a PDF on the certification page.

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

Please outline how you will implement your safeguarding policies in practice and ensure that downstream partners apply the same standards as the Lead Partner. Please highlight any key safeguarding risks, including human rights issues, their assessment and measures to mitigate and manage them.

The poverty, isolation and low levels of education/literacy amongst our target communities make them particularly vulnerable to safeguarding issues including exploitation, bullying and sexual abuse. Many of our field staff will be recruited from these same vulnerable communities so it is essential that strong safeguarding practices are established and implemented. The University of Bristol, and both implementation partners (HERD & LI-BIRD) have comprehensive safeguarding policies which will be shared with all downstream partners. All project staff will be required to sign a code-of-conduct upon recruitment and will attend a safeguarding session as part of their training, emphasising the importance of good conduct, make them aware of potential safeguarding concerns and teaching them how to recognise and deal with issues, including acting as whistle-blowers. Safeguarding assessments will be built into our monitoring and evaluation framework so that any issues are recognised and dealt with as soon as possible. Overall, there will be a zero tolerance for any bullying, harassment and sexual exploitation and abuse amongst the entire extended team.

Q30. Ethics

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

Strong ethical principles are embedded within our project design and will be implemented through the following steps:

- 1) Completion of the University of Bristol's stringent ethics review process along with the equivalent Nepali ethics review processes will ensure we are aligned with both international and local ethical principles, particularly those relating to the rights, privacy, and safety of participants and the recognition of traditional knowledge systems.
- 2) Although Nepal does not have an access and benefit sharing law, we will follow the internationally recognised best practices and obtain Prior Informed Consent before the collection of any participant data. Project partners LI-BIRD have influenced Nepal's farmer rights policy and therefore have the expertise and commitment to uphold ethical principles.
- 3) All local partners were deeply involved in the planning and design of this project, contributing to all proposal drafts and directly suggesting many of the planned activities (e.g., nutritional analysis of pollination-enhanced crops). We also engage many traditionally marginalised stakeholders (e.g., women farmers) in our project to ensure their perspectives and aspirations are well-represented.

4) In alignment with the General Data Protection Regulation (GDPR), all person-identifiable information will be kept strictly private; only anonymised data will be published or shared.

Section 13 - FCDO Notifications

Q31. FCDO Notifications


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


No

Please indicate whether you have contacted FCDO Embassy or High Commission to discuss the project and attach details of any advice you have received from them.

Yes, advice attached

Please attach details of any advice you have received.

 [Correspondence with British embassy](#)

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Section 14 - Project Staff

Q32. Project staff

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

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

Name (First name, Surname)	Role	% time on project	1 page CV or job description attached?
Jane, Memmott	Project Leader	10	Checked
Tom, Timberlake	Project Coordinator	60	Checked
Shree, Neupane	LI-BIRD Team Leader	80	Checked
Sushil Baral	HERD Team Advisor	1	Checked

Do you require more fields?


Yes


Name (First name, Surname)	Role	% time on project	1 page CV or job description attached?
Deepak, Joshi	HERD Team Leader	20	Checked
Sujan, Sapkota	Field Coordinator	100	Checked
Kedar, Devkota	Technical Advisor	5	Checked
Daya, Ram Bhusal	Technical Advisor	5	Checked
To be appointed	Program Officer	100	Checked
To be appointed	Senior Technical Assistant	100	Checked
To be appointed	x3 Agriculture Technicians	100	Checked
To be appointed	x8 Field-level Facilitators	100	Checked


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

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

 [All Darwin CVs combined](#)

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 pdf 1.13 MB

Have you attached all project staff CVs?

Yes

Section 15 - Project Partners

Q33. Project partners

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

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

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

Lead partner name: Department of Biological Sciences, University of Bristol

Website address: <http://www.bristol.ac.uk/biology/>

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

PARTNER TYPE: Lead partner

REMIT & CAPACITY: Bristol University is a world leader in pollination research, with over 25 years' experience running pollination projects around the world, including in Nepal, New Zealand, South Africa and the UK. Project leader Jane Memmott has an excellent track record in leading large international projects and driving major policy change. For example, in the £1.3M Urban Pollinators Project, Memmott led a team of four universities and four conservation organisations to understand more about pollinator biodiversity in urban areas and the results were fed directly into local (Get Bristol Buzzing), regional (West of England Pollinator Strategy), national (National Pollinator Strategy), and international pollinator policies (IPBES report).

In the ongoing Micro-Poll project in Nepal, Memmott (project leader) & Timberlake (project coordinator & lead post-doc) have successfully led a large international, interdisciplinary team, meeting project goals (despite a global pandemic) and collecting a comprehensive evidence-base to feed into this proposed Darwin project.

KEY PROJECT ROLES:

1) Overall project management and coordination. Data management, M&E, paper and report writing.

2) Contribute pollination expertise to the Stewardship Scheme design, Digital Pollination Library, information and training resources, and Pollinator Action Plan.

Allocated budget (proportion or value):



Represented on the Project Board

Yes

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:

HERD International, Nepal

Website address:

<https://www.herdint.com/>

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

PARTNER TYPE: implementation partner (receiving funds directly from Darwin)


REMIT & CAPACITY: HERD International is a Nepal-based research and development organisation, with a track-record of generating high quality evidence and incorporating it into national policies through close partnership with government departments such as the Ministry of Health and Population.

HERD have led numerous large projects across Nepal and are the lead implementors of our ongoing Micro-Poll project in Jumla District. They have established a field office and a team of 22 staff in Jumla, led training courses and overseen all stakeholder engagement activities. Their excellence in project delivery is reflected in the success of the Micro-Poll project which has met all of its intended goals to date and established a comprehensive evidence-base on which this proposed project will build. HERD have expertise in pollination ecology, human nutrition and agriculture and have the resources and facilities (including a project office in Jumla) to effectively deliver their component of the project.

KEY PROJECT ROLES:

1) Implementation and M&E of Output 1 – deliver Pollinator Awareness classes, produce pollinator awareness resources, establish demonstration farms, run Farmer Field School sessions.

2) Coordinate with high-level stakeholders and policymakers in the public health and development sectors.

Allocated budget:	
Represented on the Project Board	<input checked="" type="radio"/> Yes
Have you included a Letter of Support from this organisation?	<input checked="" type="radio"/> Yes

2. Partner Name: Local Initiatives for Biodiversity, Research and Development (LI-BIRD), Nepal

Website address: <http://www.libird.org/>

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

PARTNER TYPE: implementation partner (receiving funds directly from Darwin)

REMIT & CAPACITY: LI-BIRD is a Nepal-based NGO working on the research and development of agricultural biodiversity and sustainable agriculture for the benefit of rural communities. It works closely with federal and provincial government ministries including the Ministry of Agriculture and Livestock Development (MoALD) and the Karnali Ministry of Land Management, Agriculture and Cooperatives (MoLMAC). LI-BIRD have representatives in the National Agricultural Biodiversity and National Food Security Committees and contribute to national policies, including the National Agrobiodiversity Policy.

LI-BIRD has implemented four projects in Karnali Province and has a strong ongoing presence in Jumla District through their Plant Breeding and Seed Development projects. They have recently agreed to sign an MoU with MoLMAC in Karnali Province to establish a long-term partnership for the promotion of agrobiodiversity and climate-resilient agriculture.

KEY PROJECT ROLES:

1) Implementation and M&E of Output 2 – build capacity in pollination through training of research and extension staff and provision of pollinator information resources. Distribute funds to AFU and TU to establish the Digital Pollinator Library.

2) Implementation and M&E of Output 3 - coordinate with MoLMAC to formulate the Pollinator Action Plan and advocate for wide uptake.

Allocated budget: ██████████

Represented on the Project Board Yes

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

3. Partner Name: Ministry of Land Management, Agriculture and Cooperatives (MoLMAC), Karnali Province

Website address: <https://molmac.karnali.gov.np/#/>

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

PARTNER TYPE: facilitation partner

REMIT & CAPACITY: The Ministry of Land Management, Agriculture and Cooperatives (MoLMAC) is a branch of the provincial government in Karnali Province, responsible for designing and implementing agricultural policy. They work in close partnership with district offices across the province and have recently decided to develop Karnali as an Organic Province, in alignment with the federal government's Agriculture Development Strategy and Biodiversity Action Plan. The transition to organic farming is still ongoing and MoLMAC have requested technical support from project partners LI-BIRD, AFU and FAO Nepal to design and implement their agrobiodiversity programme. Indeed, MoLMAC and LI-BIRD are in the process of signing an MoU to formalise this partnership.

MoLMAC consider pollination management as an essential agricultural input and welcome our proposal to train extension staff in this field.

KEY PROJECT ROLES:

- 1) Lead technical working group in the design of a Pollinator Action Plan for Karnali Province.
- 2) Integrate recommendations of Pollinator Action Plan into their agricultural policy strategy in Karnali Province.

Allocated budget: ██████████

Represented on the Project Board Yes

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

4. Partner Name: Agriculture and Forest University (AFU), Nepal

Website address: <http://afu.edu.np/ag/>

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

PARTNER TYPE: facilitation partner (receiving funds through LI-BIRD)

REMIT & CAPACITY: AFU is a government-funded university in Nepal committed to promoting agriculture and forestry through teaching, research, and extension programs. Project partner, Dr Kedar Devkota, has worked on pollination in Nepal for over 10 years, after a PhD in Brazil, and was a partner of the Global Pollination Project, co-authoring a Science paper from this research (Garibaldi et al. 2016). As well as leading on research projects, AFU has a track record in policy engagement and outreach work, especially with regards to promoting sustainable agricultural practices.

KEY PROJECT ROLES:

- 1) Mobilise 10 master's students (supervised by Devkota) to collect and compile information for the Digital Pollination Library, including periods of targeted fieldwork.
 - 2) Host the Digital Pollination Library on their University website and meet the costs and staff time involved in its long-term upkeep, including updating with new information as it becomes available (see letter of support from AFU Vice Chancellor).
 - 3) Contribute to high-level policy dialogue required to formulate the National Pollinator Strategy
-

Allocated budget:	██████████
Represented on the Project Board	<input checked="" type="radio"/> Yes
Have you included a Letter of Support from this organisation?	<input checked="" type="radio"/> Yes

5. Partner Name:	Central Department of Zoology, Tribhuvan University, Nepal
Website address:	https://www.cdztu.edu.np/

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

PARTNER TYPE: facilitation partner (receiving funds through LI-BIRD)

REMIT & CAPACITY: The Central Department of Zoology (CDZ), is a highly respected department of Tribhuvan University, specialising in ecology and entomology. Our point of contact with CDZ is Dr Daya Ram Bhusal – an expert entomologist and pollination ecologist who has worked in Nepal for over 15 years. Daya is a key member of our ongoing Micro-Poll project in Jumla District and has participated in all pollination training and stakeholder engagement events and led the taxonomic identification of more than 11,000 insect specimens from the project. CDZ is well equipped with taxonomic laboratories, stereoscopic microscopes and human resources for the taxonomic identification and curation of insect specimens.

KEY PROJECT ROLES:

- 1) Databasing, digitising and species descriptions (distributions, phenology, food plants etc.) of insect specimens for the Digital Pollination Library, providing the required laboratory space and taxonomic expertise.
- 2) Contribute expertise to the design of training, outreach and capacity-building course materials.
- 3) Facilitate engagement with high-level stakeholders, including the Ministry of Forests and the Environment – the Nepal Government’s focal point for the CBD.

Allocated budget:	██████████
Represented on the Project Board	<input checked="" type="radio"/> Yes
Have you included a Letter of Support from this organisation?	<input checked="" type="radio"/> Yes

6. Partner Name: UN Food and Agriculture Organisation (FAO) Nepal

Website address: <https://www.fao.org/nepal/fao-in-nepal/our-team/en/>

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

PARTNER TYPE: whilst not formal partners due to UN partnership constraints, the FAO Country Office in Nepal have offered to work collaboratively and synergistically with our project team.

REMIT & CAPACITY: FAO has a team of 83 staff working in Nepal and have a particularly strong presence in Karnali Province where they work closely with MoLMAC to support their organic farming initiatives through a project entitled 'Strengthening capacity of Public and Private Sector Stakeholders for promotion of organic agriculture in Karnali province of Nepal'. This is part of the FAO's Hand-in-Hand initiative to accelerate agricultural transformation and sustainable rural development.

Members of our project team including Dr Tom Timberlake (Bristol), Dr Kedar Devkota (AFU) and Dr Daya Ram Bhusal (TU) have contributed expertise to the FAO's program through agroecosystem service training for Government Agriculture Officers and consultancy work (see attached CVs). Tom Timberlake is due to start some consultancy work on the FAO's organic farming project in April 2022.

KEY PROJECT ROLES:

1) Contribute expertise & share contact networks from ongoing Organic Farming project in Karnali Province

2) Liaise with agriculture ministries to embed pollination management into organic farming policies

Allocated budget: 

Represented on the Project Board No

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

If no, please provide details Whilst FAO Nepal are happy to work synergistically with our project and are already collaborating with members of the project team, their UN guidelines prevent them from establishing a formal partnership and writing letters of support. However, we have included a letter of support from the FAO head-office in Rome.

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

There are two additional partners on the project team (Letters of Support are provided from both):

1) Nepal Agriculture Research Council (NARC) - <https://narc.gov.np/> - non-monetary partner

NARC is an autonomous research organisation established by the Nepal Government to conduct agricultural research and

contribute to agricultural policy. NARC has a district office and research station in Jumla District and has already been closely collaborating with our team in the ongoing Micro-Poll study, as well as our project partners, LI-BIRD.

KEY PROJECT ROLES:

- > Local Jumla level: share research facilities including field research station and demonstration farms.
- > National level: facilitate policy discussions with federal government departments, including the Ministry of Agriculture and Livestock Development (MoALD).


2) PACE, Nepal - <https://www.pacenepal.world/> - non-monetary partner


PACE is a local Jumla-based NGO who have been working for over 15 years on sustainable livelihood development, catastrophe risk reduction and climate change adaption in Jumla District.


KEY PROJECT ROLES:


- > Embed project within local community, facilitating discussions with district & municipality stakeholders.
- > Ensure long-term project legacy in Jumla District by providing an ongoing point of contact for the project and a repository of pollinator information resources including training manuals, outreach materials etc.


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


 [All letters of support final](#)


 31/01/2022


 01:51:32

 pdf 5.45 MB

 [Darwin Stage 2 cover letter final](#)

 28/01/2022

 03:52:03

 pdf 212.76 KB

Section 16 - Lead Partner Capability and Capacity

Q34. Lead Partner Capability and Capacity

Has your organisation been awarded a Darwin Initiative funding 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
EIDPR104	Fernando Montealgre-Z	Non-invasive acoustic identification of singing amphibians in Sri Lanka
EIDPR100	Richard Wall	Agricultural intensification and African dung-insect biodiversity
14-008	Gareth Jones	The Darwin Initiative Centre for Bat Conservation in China
EIDPS002	Jane Memmott	Fellowship for Ruth Boada
No Response	No Response	No Response
No Response	No Response	No Response

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

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

Yes

Section 17 - Certification

Q35. Certification

On behalf of the

Trustees

of

University of Bristol

I apply for a grant of





██████████

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

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

- I have enclosed CVs for project key project personnel, letters of support, budget, logframe, safeguarding policy and project implementation timetable (uploaded at appropriate points in application)
- Our last two sets of signed audited/independently verified accounts and annual report are also enclosed.





Checked

Name	Ben Moore
Position in the organisation	Finance Manager
Signature (please upload e-signature)	 Ben Moore e-signature  27/01/2022  13:32:18  pdf 40.77 KB
Date	28 January 2022

Please attach the requested signed audited/independently examined accounts.

 2020 financial report relevant pages  28/01/2022  08:38:25  pdf 3.21 MB	 2021 financial report relevant pages  28/01/2022  08:38:25  pdf 3.1 MB
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Please upload the Lead Partner's Safeguarding Policy as a PDF

 University of Bristol - Safeguarding policy  28/01/2022  08:42:14  pdf 248.19 KB
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Section 18 - Submission Checklist

Checklist for submission

	Check
I have read the Guidance, including the "Darwin Initiative Guidance", "Monitoring Evaluation and Learning Guidance", "Risk Guidance" and "Financial Guidance".	Checked
I have read, and can meet, the current Terms and Conditions for this fund.	Checked
I have provided actual start and end dates for the project.	Checked
I have provided my budget based on UK government financial years i.e. 1 April - 31 March and in GBP.	Checked
I have checked that our budget is complete, correctly adds up and I have included the correct final total at the start of the application.	Checked
The application been signed by a suitably authorised individual (clear electronic or scanned signatures are acceptable).	Checked
I have included a 1 page CV or job description for all the Project Staff identified at Question 32, including the Project Leader, or provided an explanation of why not.	Checked
I have included a letter of support from the Lead Partner and partner(s) identified at Question 33, or an explanation of why not.	Checked
I have included a cover letter from the Lead Partner, outlining how any feedback received at Stage 1 has been addressed where relevant.	Checked
I have included a copy of the Lead Partner's safeguarding policy, which covers the criteria listed in Question 29.	Checked
I have been in contact with the FCDO in the project country/ies and have included any evidence of this. If not, I have provided an explanation of why not.	Checked
I have included a signed copy of the last 2 annual report and accounts for the Lead Partner, or provided an explanation if not.	Checked
I have checked the Darwin website immediately prior to submission to ensure there are no late updates.	Checked
I have read and understood the Privacy Notice on the Darwin Initiative website.	Checked

We would like to keep in touch!

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

Checked

Data protection and use of personal data

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