Applicant: **Karley, Alison**
Organisation: **The James Hutton Institute**
Funding Sought: **£9,908.00**

DIR27PP\1062

Co-creating agrobiodiversity knowledge with farming stakeholders in Malawi

Section 1 - Contact Details

PRIMARY APPLICANT DETAILS

Title	Dr
Name	Alison
Surname	Karley
Website (Work)	https://www.hutton.ac.uk/staff/alison-karley
Tel (Work)	[redacted]
Email (Work)	[redacted]
Address	[redacted]

GMS ORGANISATION

Type	**Organisation**
Name	The James Hutton Institute
Phone (Work)	[redacted]
Email (Work)	[redacted]
Website (Work)	[redacted]
Address	[redacted]

Section 2 - Title & Location

Q3. Working title of the proposed Darwin project

Co-creating agrobiodiversity knowledge with farming stakeholders in Malawi

Q4a. Host country (of proposed Partnership Project trip)

Malawi

Q4b. If this is not the intended host country for the proposed Darwin project, please justify here

Not applicable

Q4c. Other collaborating country/ies

None

Q5. Is this a resubmission of a previous scoping/Partnership application?

⦿ No

Section 3 - Partnership Project Principals & Lead Organisation Summary

Q6. Principals in Partnership Project work

Please give the details of the individuals (up to 2) who would be directly involved in the Partnership Project work – i.e. making a visit to a host country, or leading on the collaboration.

One page CVs must be uploaded below.

Details	Project Leader	2nd individual
Surname	Karley	Lozada
Forename(s)	Alison	Luz-Maria
Post held	Research Leader - Agroecology	Land Systems Analyst
Organisation	The James Hutton Institute	The James Hutton Institute
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
Have you included an one page CV?	⦿ Yes	⦿ Yes

Please upload one page CVs for all Principals involved in Partnership Project work as a combined PDF.

CV - Karley_Lozada
14/01/2021
09:55:06
pdf 250.79 KB

Q7a. About the lead applicant organisation

Briefly discuss your expertise in sustainable use or conservation of biodiversity and/or development. Please refer to recent track record you have in this field. You may be asked to provide evidence of this track record.

The James Hutton Institute is globally recognised for fundamental and applied research on sustainable land and natural resource use. Research in the Ecological Sciences Department aims to improve the management, conservation and restoration of organisms, biodiversity and ecosystems in managed and native habitats around the world. We provide expertise in sustainable land use, biodiversity management and ecological impact assessment, with a strong track record of engaging with farmers, advisors and decision-makers locally, nationally and internationally. We contribute to long-term national initiatives for biodiversity monitoring and databasing. Our agroecology research employs theoretical, empirical and qualitative approaches to examine the impact of land management and environmental change on biodiversity, ecosystem services and agroecosystem sustainability. This includes participatory research with

farmers, crofters and local partner organisations. We use research findings to develop decision support tools (e.g. landscape-scale modelling, policy briefings) and resources (e.g. technical and audiovisual guides) for land managers and other stakeholders. We coordinate multi-actor national and European projects implementing nature-based farming methods using alternative cropping practices, novel ecological food crops and biodiversity enhancement measures (e.g. Horizon 2020-funded projects DIVERSify, TRUE, FRAMEwork). We work to established principles of access and benefits sharing in relation to traditional knowledge and development opportunities.

Q7b. Have you obtained a letter of support from the lead applicant organisation?

(If yes, please upload with the partner letters of support on the next page)

⦿ Yes

Section 4 - Project Partners

Q8. About the partner organisation(s)

Please list all the partners involved and explain their roles and responsibilities in the Partnership Project work. Briefly discuss your partner's expertise in sustainable use or conservation of biodiversity and/or development. Please refer to recent track record they have in this field. You may be asked to provide evidence of this track record. If there is more than 1 partner organisation, you can enter the details of more partners below. Please specify which of the partners is new to the partnership.

Partner name:	Department of Agricultural Research Services (DARS)
Website address:	http://dars.mw/
Details of anticipated roles and responsibilities:	Host a visit to Malawi by two researchers from the James Hutton Institute. Facilitate travel by the visiting researchers to farmer trial sites and introduce them to farmers and extension workers networks Contribute to the planning and facilitation of stakeholder workshops during the visits and review the resulting workshop reports
Expertise in sustainable use or conservation of biodiversity and/or development:	The mission of DARS is to conduct strategic and demand driven research that generates environmentally-friendly technologies and information. DARS carries out research to develop agricultural technologies that improve farming and food production, and it provides essential advisory services to farmers. DARS has expertise in developing and testing innovations in sustainable farming practices that reduce the need for agrochemical inputs and instead promote biological functions in the farming system. The research is carried out on DARS research stations and on smallholder farms at sites across Malawi, encompassing different agroecological zones. This work includes co-creating and implementing novel practices with smallholder farmers to test the performance, acceptability and sustainability of changes in farming practice. This is a new partnership between the lead and this partner.
Name of main contact and post held:	Austin Tenthani Phiri, PhD Chief Agricultural Research Scientist

Letter of support submitted?	⦿ Yes

Do you have more than one partner involved in the Partnership Project work?

⦿ Yes

2. Partner Name:	LILONGWE UNIVERSITY OF AGRICULTURE AND NATURAL RESOURCES
Website address:	http://www.luanar.ac.mw/luanar/
Letter of Support:	Host a visit to Malawi by two researchers from the James Hutton Institute. Accompany visiting researchers to research sites and introduce them to farmers and NGOs (e.g. DAPP) Data mobilization on agrobiodiversity focusing on arthropods Contribute to logistics planning for the learning survey in Malawi, and running of stakeholder workshops
Expertise in sustainable use or conservation of biodiversity and/or development:	LUANAR's mission is to conduct challenge-led research aimed at promoting a rich quality of life in Malawi and beyond. LUANAR has expertise in conservation of agrobiodiversity through identification, evaluation and promotion of more environmentally friendly pest management options focusing on botanical pesticides, use of intercropping and species assessment and identification. This work provides a foundation for registering the conservation status of target organisms and setting conservation targets and priorities. This is a new partnership between the lead and this partner.
Name of main contact point and post held:	TRUST KASAMBALA DONGA, senior lecturer in entomology
Have you included a letter of support from this organisation?	⦿ Yes

3. Partner Name:	*No Response*
Website address:	*No Response*
Details of anticipated roles and responsibilities:	*No Response*
Expertise in sustainable use or conservation of biodiversity and/or development:	*No Response*
Name of main contact point and post held:	*No Response*

Have you included a letter of support from this organisation?	◯ Yes ◯ No

4. Partner Name:	*No Response*
Website address:	*No Response*
Letter of Support:	*No Response*
Expertise in sustainable use or conservation of biodiversity and/or development:	*No Response*
Name of main contact point and post held:	*No Response*
Have you included a letter of support from this organisation?	◯ Yes ◯ No

5. Partner Name:	*No Response*
Website address:	*No Response*
Letter of Support:	*No Response*
Expertise in sustainable use or conservation of biodiversity and/or development:	*No Response*
Name of main contact point and post held:	*No Response*
Have you included a letter of support from this organisation?	◯ Yes ◯ No

6. Partner Name:	*No Response*
Website address:	*No Response*
Details of anticipated roles and responsibilities:	*No Response*
Expertise in sustainable use or conservation of biodiversity and/or development:	*No Response*

Name of main contact point and post held:	*No Response*
Have you included a letter of support from this organisation?	◯ Yes ◯ No

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

LettersofSupport_Hutton_DARS_LUANAR
16/01/2021
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pdf 1.28 MB

Q9. Can you confirm that at least one of the partners have not previously been in receipt of Darwin funds from the same lead partner?

⦿ Yes

Section 5 - Justification & Concept Notes

Q10. Justification of need for a Partnership Project

Please provide written details of why alternative funding is not available from within your own organisation or from other sources. Will matched funding be provided?

The James Hutton Institute is a not-for-profit research organisation operating a full economic costing model for research and development contracts. We bid for public, private and third sector funding sources to deliver research outcomes requested by the funder. We do not have specific discretionary funds to use flexibly for establishing international funding collaborations, but we will align the work proposed in this application with allied projects supported by Scottish Government and EU funding for the purposes of preparatory work before the planned visit (e.g. questionnaire development) and dissemination of project outcomes. This alignment of work will bring benefits across the board in terms of maximising the opportunities provided by existing resources and expertise, and in improved final impact.

Q11. Concept note for the Partnership Project

This question concentrates on the Partnership Project work and should demonstrate the objectives of the project including:

- **objectives of the visit**
- **what work (including research, remote communications or other collaborations) has been carried out prior to applying for this project**
- **what work will be carried out under the Partnership Project – please see the guidance for advice on what type of activity can be funded**
- **evidence of the proposed partners' intentions to collaborate in your Partnership Project work**

The objectives are: i) develop a partnership between James Hutton Institute agroecologists/social scientists and agricultural/environmental researchers in Malawi and their stakeholders; ii) visit field sites to learn about agroecological research in Malawi; and iii) conduct workshops with smallholders to identify tacit knowledge of agrobiodiversity function and social/cultural acceptability of agroecological enhancements. The partnership aligns UK expertise in biodiversity-sensitive farming methods with two research fields

pioneered by partners in Malawi: innovations in sustainable farming practices (DARS), and novel databasing of agrobiodiversity (LUANAR). The project will build mutual understanding of wider aims for agrobiodiversity conservation and sustainable agriculture in Malawi; and form essential preparation for building collaboration with scientists, stakeholders and NGOs in a Main Darwin Initiative proposal.
The partners have communicated through video calls and email to learn about the policy framework for agrobiodiversity conservation in Malawi and current research. The Malawi National Government has targets for protecting biodiversity (Government of Malawi, 2015: National Biodiversity Strategy and Action Plan II). Crop and agroecosystem biodiversity and its associated traditional ecological knowledge are recognised to have significant potential for driving economic development of Malawi's agro-based economy (Workshop Report, 2008: Towards the Development of a Comprehensive Malawi Agro-biodiversity Policy and Legislation). About 70% of Malawi's 18 million people are engaged in smallholder subsistence farming, which is characterised by low productivity and profitability, and more than half of Malawi's population lives below the poverty line. Potential threats to agrobiodiversity in these systems include limited information about the organisms supported by agroecosystems, lack of legislation and mechanisms to promote agrobiodiversity conservation and sustainable use, adoption of modern varieties and agronomic practices, and climate change. As a first step, agrobiodiversity data is being collected by LUANAR on target organisms (e.g. pollinators, natural enemies of pests) with the aim of setting conservation priorities. This provides an important baseline for exploring the potential impact of changing agricultural practices on agrobiodiversity abundance, composition and function. In parallel, DARS is trialling agroecological practices with smallholders to replace synthetic fertiliser inputs with 'nature-based' solutions.
The lead partner (two people) will travel to Malawi and accompany the host partner scientists in visiting their on-farm research projects in three agroecological zones (Salima district (central), Mzimba (north), Chikwawa (south)). The hosts will set up workshops in each area in consultation with local agricultural extension services and the NGO Development Aid from People to People. The host will communicate the project objectives to stakeholders in local languages. The workshops will use social science methodologies developed between UK and Malawi scientists, including participatory dynamics (e.g. focus groups, post-its, photographs), to reveal tacit and codified knowledge of the functional role of agrobiodiversity, and whether/how this agrobiodiversity is valued by farmers and extension services. Workshop participants will be selected by the partnership for good representation of smallholder production systems, taking gender balance into account. To close each workshop, we will present agrobiodiversity principles for UK production systems and answer questions. A report of these processes and results will form the basis for the main Darwin proposal and logframe.

Q12. Concept note for the resultant project

This question concentrates on the full Darwin application you intend to submit after the Partnership Project and should discuss:

- **the expected Outcome and Outputs of the resultant Darwin project**
- **how the resultant Darwin project would meet a need in the host country (and the wider region if applicable e.g. if the proposed project would be based in a UMIC)**
- **how the project would contribute to any or all of the Conventions and Treaties supported by Darwin, including the SDGs**
- **how the project will contribute to sustainable development in the country concerned**
- **briefly explain the proposed partner role(s) in the resultant Darwin project**
- **briefly the expected role of the Partnership Project travellers in the resultant Darwin project.**

The main project will work with farmers and other stakeholders to characterise agroecological practices that enhance crop productivity and economic security through improved biodiversity and agroecosystem function. It will characterise the social, cultural, environmental and economic considerations and consequences of implementing innovative agroecological farming practices that diversify the crop system and support agrobiodiversity. Focussing on three agroecological zones, Hutton scientists will work with DARS and LUANAR scientists and stakeholders (farmers, extension workers, supply chain actors) to identify

locally appropriate agroecological practices and design pilot studies for implementing practices and monitoring outcomes with smallholders. Hutton, DARS and LUANAR will lead agronomic/environmental assessments of trials (Karley, Phiri, Donga), and conduct social surveys and economic analysis (Lozada). This builds on the partners' current research and will tap into tacit and codified knowledge of farmers and other stakeholders about agrobiodiversity and its functions. The outcome will be a set of recommended agroecological practices that support improved biodiversity and agroecosystem function, including greater crop productivity, beneficial organism activity, and fewer costly agrochemical inputs. Outputs will be developed from co-created knowledge between scientists and stakeholders: i) socioeconomic, agronomic and environmental datasets, ii) training, factsheets and infographics for extension workers and farmers to build capacity in biodiversity-sensitive farming practices (e.g. beneficial insect identification guides), iii) on-farm trials for peer demonstration, iv) resources and tools communicating the socioeconomic, agronomic and environmental outcomes of increased agrobiodiversity for extension workers, scientists and NGOs, and v) recommendations on tools and policy support mechanisms for socially acceptable agrobiodiversity conservation.

A key target in the Malawi Government's National Biodiversity Strategy and Action Plan (2015) is to raise awareness of the value of biodiversity, ensure its conservation and sustainable use, and its integration into national and local development policies. The main project will provide socioeconomic, environmental and agronomic data to develop policies for biodiversity conservation through agroecological practices that support sustainable farming and food production. This will be complemented by trials co-designed with stakeholders to demonstrate and support practical implementation. These outcomes align with biodiversity conservation goals (Convention on Biological Diversity), two-way benefits sharing from traditional farming knowledge (Nagoya Protocol on Access and Benefits Sharing), and preserving crop diversity (International Treaty on Plant Genetic Resources for Food and Agriculture) and local wildlife (CITES). The partners will build on existing routes to policy and local development organisations (e.g. DAPP) to achieve impact.

Hutton offers multi-disciplinary research expertise for developing the co-design approach in smallholder systems in Malawi, from experience gained in UK and Mexican farming systems working with farmers, smallholders and crofters. Collaboration between UK/Malawi scientists and Malawi stakeholders will co-create knowledge about practices that enhance agrobiodiversity and its functions; this knowledge co-creation will directly support smallholders in adopting new agroecological practices that optimise the social and economic value of biodiversity (e.g. improved pollination, input reduction, climate resilience) to ensure long-term agricultural sustainability. These outcomes support Darwin Initiative objectives to tackle impacts of agricultural practices on biodiversity, livelihoods, and climate; and to promote responsible stewardship through sustainable use of natural assets and sustainable livelihoods.

Section 6 - Costs

Q13. Costs

Provide a detailed breakdown of costs to be funded by the Darwin Initiative in GBP.

	Project Leader	Second individual	Total
Airfare including travel to airport	£[redacted]	[redacted]	[redacted]
Visas and other travel documents	£[redacted]	[redacted]	[redacted]
Daily subsistence rate per day	£[redacted]	[redacted]	

Number of days subsistence claimed (max 30 days per traveller)	[redacted]	[redacted]	
Total daily subsistence claimed (please provide details below)	**£** [redacted]	[redacted]	[redacted]
Workshop costs (please provide details below)			[redacted]
Other costs (please provide details below)			£[redacted]
		Total request from Darwin (must not exceed £10,000)	**£** [redacted]

Additional details to support the figures above

	Project Leader	**Second individual**
Average expected subsistence rate per day	£[redacted]	[redacted]
Number of days subsistence claimed	[redacted]	[redacted]

Workshop costs

Please provide further details on your workshops costs (N/A if not relevant).

We request £[redacted] for room hire (e.g. village halls) for workshops at each field site (£[redacted] per workshop, three workshops)

Further details on subsistence costs requested:
£[redacted] per person per day for food for ten days of travel = £[redacted] per person
£[redacted] per person per night accommodation (e.g. hotel room) for 7 nights = £[redacted] pp
Total per person = £[redacted] for ten days of travel

Other costs

Please provide further details on Other costs e.g. subscription to communications platforms, purchase of tablets for local partners etc (N/A if not relevant).

A total of £[redacted] requested in 'other costs', which is broken down as follows:

We request total salary costs £[redacted] for two travellers to cover time spent on in-country travel to visit field

sites and conduct workshops in Malawi. This comprises £[redacted] research staff costs and £[redacted] overheads (at [redacted] of our full economic costing model). Overheads equate to [redacted] of the total project costs (i.e. within the [redacted] maximum threshold)

We also request £[redacted] for car battery hire to ensure power supply for workshops

We request £[redacted] for in-country travel to field site regions to cover car rental for the 6 d travel period (£[redacted] per day, including fuel)

Section 7 - Timetable & Activities

Q14. Provide anticipated dates of travel (start and finish) and activities to be undertaken on your trip.

N.B.: this question is specifically about your travel plans – your dates and specific milestones during travel – NOT your timetable to Stage 1 application. Your application will be considered ineligible if this section does not specifically cover your planned Partnership Project trip.

Date	Milestone
01 November 2021	**START**
15 November 2021	Confirm travel plans with partners; Partners discuss first draft of workshop questionnaire
17 December 2021	Final draft of workshop questionnaire agreed by partners
21 January 2022	Rail travel to airport, and flight to Lilongwe
23 January 2022	Travel to Mzimba (Northern region), visit research trial sites
24 January 2022	Conduct first workshop, return to Lilongwe
25 January 2022	Travel to Chikwawa and Thyolo (Southern region), visit research trial sites
26 January 2022	Conduct second workshop, return to Lilongwe
27 January 2022	Visit Salima district research trials (Central region), conduct third workshop
28 January 2022	Return to Lilongwe, tour of DARS and LUANAR
29 January 2022	Board flight to UK, return travel to Scotland
18 February 2022	Workshop report prepared and shared with partners
28 February 2022	**FINISH**

Q15. In what year would you expect to submit the full Darwin project application?

◉ Round 29

Section 8 - Certification

Q16. Certification

On behalf of the

company

of

The James Hutton Institute

I apply for a grant of

£9,908.00

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 Partnership 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**
- **I have uploaded letters of support from the lead application organisation and the partner(s)**

Checked

Name	Hugh Darby
Position in the organisation	Director of Finance and Company Secretary
Signature (please upload e-signature)	signature - HD sig 16/01/2021 06:33:12 pdf 295.5 KB
Date	15 January 2021

Section 9 - Submission Checklist

Checklist for submission

	Check
I have read the Guidance Notes **for Main projects as well as the Guidance for Partnership Projects and am satisfied that this concept would be eligible for a main project application.**	Checked

I have read, and can meet, the current Terms and Conditions **for this fund.**	Checked
I have provided anticipated start and end dates for my Partnership Project trip.	Checked
I have checked that my budget is complete and correctly adds up.	Checked
My application has been signed by a suitably authorised individual (clear electronic or scanned signatures are acceptable).	Checked
I have included one page CVs and letters of support as required.	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 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 main traveller/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 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).