

Applicant: **Martinou, Kelly**
Organisation: **The Cyprus Institute**
Funding Sought: **£36,480.00**

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Akrotiri hosts about 360 bird species, of which 124 listed in Annex I, Birds Directive, and numerous insects. For sites used by designated birds, ecosystem services, disservices and conflicts due to different land uses, will be examined. Data will support environmental management in the SBAs.

Section 1 - Contact Details

PRIMARY APPLICANT DETAILS

Title	Dr
Name	Kelly
Surname	Martinou
Website (Personal)	[REDACTED]
Tel (Mobile)	[REDACTED]
Email (Personal)	[REDACTED]
Address	[REDACTED]

GMS ORGANISATION

Type	Organisation
Name	The Cyprus Institute
Phone	[REDACTED]
Email	[REDACTED]
Website	[REDACTED]
Address	[REDACTED]

Section 2 - Title, Dates & Budget Summary

Q3. Name and official address of proposed Darwin Plus Fellow

Include email details where available.

Name	MARIA CHRISTOU
Address	[REDACTED]
Email Address	[REDACTED]

Q4. Summary of proposed Fellowship i.e. Outcome

Akrotiri hosts about 360 bird species, of which 124 listed in Annex I, Birds Directive, and numerous insects. For sites used by designated birds, ecosystem services, disservices and conflicts due to different land uses, will be examined. Data will support environmental management in the SBAs.

Q5. Project dates

Start date:

01 December 2022

End date:

30 November 2024

Duration (e.g. 1 year, 2 months):

2 years

Q6. Budget summary


	2022/2023	2023/24	2024/2025	Total
Darwin funding request (Apr - Mar)	6,480.00	15,840	14,160.00	£ 36,480.00

Section 3 - Principals

Q7. UKOT Involved

Q7a. Please state which UKOT (s) will be involved with the Fellowship?

Sovereign Base Areas of Akrotiri and Dhekelia (SBA), Cyprus

Q7b. Have you included a letter of support from the relevant OT Government(s)? Yes**Please provide a combined PDF of all letters of support** [pdfjoiner](#) 07/01/2022 09:29:03 pdf 2.47 MB

Q8. Principals in the Fellowship

Please give the details of the individuals from the applicant and host organisations (and other institutions if relevant) who would be directly involved in supervising/working with the Darwin Plus Fellow.

Details	Project Leader	Other Expert	Other Expert	Other Expert
Surname	Martinou	Hadjikyriakou	Erguler	Roy
Forename(s)	Angeliki (Kelly)	Thomas	Kamil	Helen
Post held	Head Entomologist	Manager	Associate Research Scientist	Ecologist (Individual Merit (IMP) Scientist and Group Leader)
Organisation	JSHU, CARE-C(Cyl)	Akrotiri Environmental Education Centre	CARE-C(Cyl)	UK Centre for Ecology & Hydrology

Telephone/Skype

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Email

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]


Do you require more fields?

No

Please provide a one page CV for each of these named individuals, including the Fellow named at Q3, uploaded as one PDF.

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Section 4 - Aims, Activities & Achievements

Q9. Describe briefly the aims, activities and achievements of the proposed Fellow's employing organisation.

Large institutions please note this should describe your unit or department.

Climate and Atmosphere Research Centre (CARE-C) of the Cyprus Institute is a non-profit research and educational centre with a strong scientific and technological orientation.

Joint Services Health Unit (JSHU) is a military unit with entomological, environmental health, and pest control expertise that runs the integrated pest and vector management programmes in Cyprus and overseas. The unit has expertise in applied and medical entomology, vector ecology and pest management.

Akrotiri Environmental Education Centre (AEEC) main objectives are to offer environmental education, undertake and facilitate ecological research and support environmental management of Akrotiri Peninsula. It offers educational programmes on different subjects, while research focuses on critical environmental aspects of the SBAs (e.g. protected/ endangered bird and plant species). Research results are directly feeding management efforts and support decision making.

UK Centre for Ecology & Hydrology (UKCEH) is an independent, not-for-profit research institute that works towards creating a productive, resilient and healthy environment.

Q10. Describe briefly the proposed Fellow's current role within their organisation and what relevance this has to environmental management and/or climate change in the OTs.

The proposed fellow has broad experience in biodiversity monitoring, her Bachelor's (Aristotle University of Thessaloniki) and Master's thesis (University of York) focused on bird ecology. For her PhD thesis she assessed the impacts of the introduction of a European legislation using questionnaires to stakeholders and bio-economic modelling.

At her current role at CARE-C, she has been studying the climate change impacts on mosquito and sandflies, through modelling and mapping. She has contributed to a Pan-European survey of alien invasive mosquito species. She is also a first aider and occupation health representative, drafting standard operating procedures and risk assessments for her fieldwork.

She is a visiting scientist at JSHU since 2020, contributing towards Darwin Plus projects (Darwin Plus 088, Darwin Plus 056) and fellowships (Darwin Plus 101) in collaboration with UKCEH, regarding biodiversity monitoring, pollinators, mosquito and plant identification at the Akrotiri area.

Moreover, she has been actively engaging citizens in recording alien mosquitoes and pollinators through engagement events at the AEEC. Her previous work has contributed to the development of environmental education programmes.

The current fellowship will provide evidence to underpin conservation initiatives and contribute to environmental policy

and environmental health in SBAs in a replicable and cost effective way.

Section 5 - Outcomes & Objectives

Q11. Provide a concept note on the Fellowship. This should include:

Q11a. A clear outline of the aim and objectives of the Fellowship

Akrotiri Peninsula, has been designated as a Special Protection Area (SPA) and a Special Area of Conservation (SAC) based on its importance for birds and habitats. As the Akrotiri wetland is a designated Ramsar Site, its ecosystem services should be exploited to the point that its integrity and health remain intact. Wild bird species in Akrotiri are reservoirs of vector borne diseases such as West Nile Virus (Pallari et al., 2021), urbanization taking place at adjacent to the wetland sites is expected to increase human-bird-mosquito interactions in the future (non-military development plan). The proposed fellowship will be based on previous work by Hadjikyriakou (2021), (co-leader) that resulted in the Spatio-Temporal Akrotiri Bird Checklist (STABC) which identified 124 birds listed in Annex I Birds Directive (2009/147/EC). Following SPA designation, Annex I bird species are a management priority, therefore STABC will be used during this fellowship to pinpoint:

- i. bird hotspots with emphasis on Annex I species
- ii. ecosystem services (e.g. pollination, recreation) and disservices, such as nuisance at bird hotspots
- iii. conflicts that arise at bird hotspots due to different stakeholders' interests, land uses, invasive species, etc.

For the ecosystem services/ disservices assessment, we will use existing data (e.g. mosquito data from JSHU, open source remote sensing data), expert knowledge, questionnaires for visitors and residents, citizen science (e.g. FIT Count App developed through DPlus056) and insect surveys in collaboration with other fellows (DPlus123, 124, 101)/ candidates (e.g. Falco eleonora project). The integration of this information will provide GIS layers of ecosystem services/disservices at bird hotspots. Perceptions of mosquito nuisance will be analysed in relation to longitudinal mosquito data and landscape/environmental parameters using statistical modelling.

This fellowship will improve the existing conservation measures and the SBA environmental health action plan. The methods of this study could also be applied at other OTs.

Q11b. The role of the applicant and/or host organisation, and others where relevant

The Fellow will identify the bird hotspots through the application of set criteria. Following this step, ecosystem services will be assessed at the bird hotspots across Akrotiri Peninsula using the Common International Classification of Ecosystem Services (CICES) protocol. An array of ecosystem services will be examined, such as the service of pollination, recreation activities and disservices caused by vectors of disease through existing data (i.e. mosquito time series data, remote sensing data), citizen science data, and field surveys. She will also assess the pressures (e.g. land use change, invasive species) at the bird hotspots and discuss with relevant authorities/ OT government current and potential measures to improve the conservation and reduce the environmental health risk. This effort will result in creating GIS layers for ecosystem services/disservices and pressures at bird hotspots that will be important for environmental management. Furthermore, the fellow will create a group of active citizens to promote citizen science for pollinators and mosquitoes for long term monitoring and disseminate outputs.

Dr Martinou (project leader, JSHU/ CARE-C) will be responsible for day to day supervision and support of the fellow in entomology, ecosystem services assessment and field studies. JSHU will provide core entomological data and equipment, advice on methodologies and will provide in kind contribution field expenses, consumables, personnel. Dr Martinou has co-led previous D-Plus projects related to entomology, ecosystem services and invasive species.

Dr Hadjikyriakou (co-leader, AEEC) will guide the fellow in bird studies and GIS applications. AEEC will host dissemination events and meetings with relevant authorities and promote citizen science activities.

Dr Erguler (CARE-C) will help the applicant in modelling, spatial analysis and developing interactive visualisations.

Prof. Roy (UKCEH) will guide the applicant in insect ecology, citizen science and science communication and pressures related to biological invasions. The team will meet weekly to discuss project progress

Q11c. Where appropriate, how the Fellowship will contribute towards environment and/or climate change management in the OTs i.e. what the expected outcome of the Fellowship will be, with regard to the aim of Darwin Plus.

This project is in line with Darwin Plus Round 10/OT priorities:

- For the priorities "the preventative action to halt the extinction of endemic species" and "improving the terrestrial ecosystems", the fellowship will identify the most important areas for biodiversity conservation and suggest specific measures for endemic species, such as the Cyprus warbler
- To contribute to the "implementation of National Biodiversity and Environment Action Plans" and "the conservation of

wetlands” we will identify the bird hotspots, and the main ecosystem services and disservices across different habitats (including wetlands) of Akrotiri Peninsula. To preserve and promote the wise use of these areas while understanding the socio-economic value that these hold for different stakeholders, conflicts that arise will be identified. The project will aid towards the long term conservation of the area

- Towards “having strong buy in and collaborate with the OT governments” we will work together with environmental health, environmental policy OT and Cyprus officers, scientists and other stakeholders for proposing practical recommendations for the area, to ensure conservation actions and to encourage replication elsewhere
- We will “create synergies between tackling climate change and halting biodiversity loss” by collaborating with CARE-C, a leading organisation in the EMME region. Several pressures such as climate change, urbanization, intensive agricultural practices, and invasive species threaten the wetland ecosystems, leading to alteration of species distribution and ecological processes, and these will be investigated through the project.
- We will disseminate to the public through events, the wetlands role for “climate change adaptation”, as they can act as “nature based solutions” for safeguarding ecosystem services, biodiversity and good quality of life
- By looking at the role of non-native and native habitats for ecosystem services/disservices in bird hotspots and promoting citizen science, we will help towards “tackling the threat of invasive non-native species”

Section 6 - Legacy & Collaboration

Q12. Legacy

Provide information on how the Fellow will utilise, promote and disseminate the benefits of the Fellowship on return to their UKOT. Will a strategy be developed during the Fellowship to ensure this is achieved?

The project design includes a strategy to ensure that the Fellow will utilise the outcomes of the fellowship. The proposed fellow will promote the project outcomes widely, including public talks/events, and create useful information for environmental management, such as GIS layers to ensure its legacy beyond the extent of the fellowship. New data will be published openly in biodiversity and citizen science platforms (e.g. VectorNet, GBIF) after the project’s completion. JSHU will utilise the collected adult mosquito data and residents’ perceptions on ecosystem services and disservices for adjusting the mosquito monitoring and control scheme.

Throughout this project, the fellow will consider opportunities for knowledge exchange to other UKOTs. Key recommendations will be communicated to relevant stakeholders, such as members of the Community Council of Akrotiri and NGOs. The fellowship will improve knowledge for biodiversity conservation purposes with respect to the Akrotiri Peninsula Management Plan and Cyprus Biodiversity Strategy. Reports and scientific publications that may stem from the research undertaken will be discussed with experts, authorities, and other stakeholders for policy recommendations proposal and used for Environmental education projects undertaken at AEEC. The project outputs will be promoted widely across the Republic of Cyprus and the OTs through public dissemination events.

Q13. Priorities

How will the Fellowship assist the OT’s environmental priorities? Please refer to strategy papers, white papers or other materials as appropriate.

Akrotiri SBA hosts a number of rare and threatened species and natural habitats. Despite the different protection statuses, the area is used by different beneficiaries, and thus various threats arise. The proposed fellowship will focus on the bird hotspots identified through this project and help the OT and Cyprus authorities to take relevant measures for designated species/sites, evaluate ecosystem services/disservices, pressures and environmental health risks. Through the fellowship, GIS layers of ecosystem services/disservices, identification of pressures and insect (mosquitoes and pollinators) time-series during two bird breeding seasons will give environmental policy and health officers, essential information regarding the conflicts at bird hotspots and propose de-conflicting actions. Moreover, the project will help towards tackling invasive species, by exploring the role of non-native and native habitats for pollinators and mosquitoes at bird hotspots and promoting citizen science. The fellowship will strengthen the engagement between UK and the SBAs, will communicate the outcomes widely to relevant stakeholders and the public and feed AEEC environmental education programmes. In the long term, the fellowship will contribute to the “25 UK environmental plan” which sets out UK’s commitment to address climate change and protect wetlands, connect people with the environment to improve health and wellbeing.

Q14. Collaboration

What collaboration has there been with the proposed Fellow to date in developing the proposal, and what collaboration is planned for the duration of the Fellowship? Where relevant, describe any consultation or collaboration by the proposed Fellow within their own territory.

The fellow has been working in CARE-C since 2019 and is a collaborator of JSU since 2020. During this time she has been involved in the projects "DPlus088", "DPlus056", "Aedes Invasive Mosquito (AIM) COST Action" by collecting data for invasive species, pollinators, vectors of disease, and collaborating with international partners, including UKCEH. She has also co-organised a dissemination event in AEEC to inform local stakeholders on citizen science groups and mobile apps such as "Mosquito alert", "Pollinators Fit count" and "three Mosquiteers". She has also participated in the development of environmental education programs at AEEC.

The current fellowship will help the continuation of the aforementioned activities and continue the collaboration among experts based on the CARE-C, the JSU, the UKCEH and the AEEC. If Covid19 measures allow, Prof Roy will visit Cyprus to guide the applicant. The fellow's research will focus in Akrotiri SBA therefore she will be based at JSU for her entomological work, have weekly visits with AEEC staff for bird hotspot assessments and regular e-communication with UKCEH colleagues for ecosystem services evaluation and CARE-C collaborators for modelling/mapping. She will communicate the outcomes to other UKOTs (e.g. report, Sanctuary articles and scientific publications), authorities, stakeholders and the public.

Q15. Where will the Fellow be based?

Please be specific with organisational details and dates (where more than one location).

Dr Christou' will collect data across the Akrotiri Peninsula. She will be based at JSU for her entomological work, ecosystem services/disservices assessment and promoting citizen science in collaboration with UKCEH, at the AEEC for the ornithological aspect of her work and regular communication with CARE-C colleagues for mapping/ modelling purposes. During the first 3 months she will do preparatory work to identify the bird hotspots after consultation with authorities, equipment procurement, and organise citizen science activities. From month 4 onwards the fellow will work for two breeding periods (16 months) in the field. She will be collecting mosquito and pollinators' data, assessing ecosystem services/disservices and pressures for environmental health and conservation action and promote citizen science. A final report will be drafted and communicated to other UKOTs. She will also initiate dissemination activities and participate in collaborative actions for knowledge exchange regarding the outputs of the fellowship. She will communicate with local stakeholders and visitors of the area to raise awareness on the services and biodiversity provided by Akrotiri wetland through events. Towards the end of the fellowship she will organise a meeting with authorities to discuss recommendations for the management of the area.

Section 7 - Programme of Work & Funding


Q16. Provide a programme of work, including key milestones, through the duration of the Fellowship

Please complete the Word template linked below to describe the intended workplan for your project.


[Darwin Plus Fellowship Implementation Timetable Template](#)

For each activity (add/remove rows as appropriate) indicate the number of months it will last, and shade only the quarters in which an activity will be carried out.

Once you have completed your implementation timetable please upload it as a PDF using the file upload tool below.

 [R10-DPlus-Fellowship-Implementation-Timetable](#)

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Q17. Costs


Using UK Government Financial Years (i.e. April 2021 – March 2022 etc.), please provide details of the costs associated with this Fellowship in the appropriate Darwin Plus spreadsheet.

[Darwin Plus Budget Template](#)

Please note, this should not be presented as academic years.

 [Budget-under-£100K-Aug21-Final-MASTER](#)

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Section 8 - Certification

Certification

On behalf of the

Company

of

The Cyprus Institute

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 fellowship 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 fellowship principals and letters of support.

Checked


Name


ANGELIKI MARTINO

Position in Organisation


Head Entomologist/ Research Affiliate

Signed

 [thumbnail image](#)

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Dated

07 January 2022

Section 9 - Submission Checklist

I have read the Guidance documents, including the “Guidance Notes for Applicants” and “Finance 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 my project. Checked

I have provided a budget based on UK government financial years i.e. 1 April – 31 March and in GBP. Checked

The application has been signed by a suitably authorised individual (clear electronic or scanned signatures are acceptable). Checked

I have checked the Darwin Plus website immediately prior to submission to ensure there are no late updates. Checked

I have provided the relevant letters of support and CVs with this application. Checked

I have read and understood the Privacy Notice on the Darwin Plus 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, Darwin Plus 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](#).

This **Privacy Notice must be provided to all individuals** whose personal data is supplied in the application form. Some information may be used when publicising Darwin Plus including project details (usually title, lead partner, project leader, location, and total grant value).