

Applicant: **Roy, Helen**
Organisation: **Centre for Ecology & Hydrology**
Funding Sought: **£29,060.00**
Funding Awarded: **£29,060.00**

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DPLUS101 Ioanna Angelidou

Invasive Non-Native Species are leading to biodiversity loss across the Sovereign Base Areas, Cyprus. The proposed fellowship complements the Darwin Plus funded study “Addressing drivers of ecological change in Lake Akrotiri SBA” by quantifying ecosystem services provided by this important wetland and how different drivers impact these benefits to people.

PRIMARY APPLICANT DETAILS

Title	Prof
Name	Helen
Surname	Roy
Website (Work)	https://www.ceh.ac.uk/staff/ [Redacted]
Tel (Work)	[Redacted]
Email (Work)	[Redacted]
Address	[Redacted] [Redacted] [Redacted] [Redacted] [Redacted] [Redacted]

Section 1 - Contact Details

PRIMARY APPLICANT DETAILS

Title Prof
Name Helen
Surname Roy
Website (Work) [REDACTED]
Tel (Work) [REDACTED]
Email (Work) [REDACTED]
Address [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

GMS ORGANISATION

Type	Organisation
Name	Centre for Ecology & Hydrology
Phone (Work)	[REDACTED]
Email (Work)	[REDACTED]
Website (Work)	[REDACTED]
Address	[REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED]

Section 2 - Title, Dates & Budget Summary

Q3. Name and official address of proposed Darwin Plus Fellow

Include email details where available. Please include a one page CV with the package of CVs at Q8.

Name Ioanna Angelidou

Address [REDACTED]

Email Address [REDACTED]

Q4. Summary of proposed Fellowship i.e. Outcome

Invasive Non-Native Species are leading to biodiversity loss across the Sovereign Base Areas, Cyprus. The

proposed fellowship complements the Darwin Plus funded study “Addressing drivers of ecological change in Lake Akrotiri SBA” by quantifying ecosystem services provided by this important wetland and how different drivers impact these benefits to people.

Q5. Project dates

Start date:

01 April 2020

End date:

31 March 2022

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

2 years

Q6. Budget summary

	2020/2021	2021/2022	Total
Darwin funding request (Apr - Mar)			£ 29,060.00

Section 3 - Principals

Q7. UKOT Involved

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

Cyprus SBA


Q7b. Have you included a letter of support from OT Government?

Yes

Please provide a combined PDF of all letters of support

 [Letter of Support Angelidou Final](#)

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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. Please provide a one page CV for each of these named individuals.

Details	Project Leader	Other Expert	Other Expert	Other Expert
Surname	Roy	Martinou	Mancini	No Response
Forename(s)	Helen	Angeliki	Francesca	No Response


Post held	Ecologist	Entomologist	Ecologists	<i>No Response</i>
Organisation	UK Centre for Ecology & Hydrology	Joint Services Health Unit	UK Centre for Ecology & Hydrology	<i>No Response</i>
Telephone/Skype	██████████	<i>No Response</i>	<i>No Response</i>	<i>No Response</i>
Email	██████████	<i>No Response</i>	<i>No Response</i>	<i>No Response</i>


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.

 [CURRICULUM VITAE All](#)

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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.

Joint Services Health Unit (JSHU) is a military unit established in 1968 with environmental health, entomological and pest control expertise that runs the integrated pest and vector management programme in the Sovereign Base Areas of Akrotiri, Episkopi, Dhekeleia, Ayios Nikolaos and Troodos and overseas upon request. The unit has military and civilian experts in environmental health, medical entomology, vector ecology and pest management. JSHU will greatly benefit from the proposed fellowship as it is seen as a priority to raise awareness regarding the importance of biodiversity and the ecosystem services it provides within the Sovereign Base Areas in Cyprus.

The UK Centre for Ecology & Hydrology is the UK's Centre of Excellence for integrated research in terrestrial and freshwater ecosystems. UKCEH provides innovative, independent and interdisciplinary science and long-term environmental monitoring. Our science helps the UK to meet strategic research needs underpinning our ability to undertake world-class environmental science.

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.

Miss Joanna Angelidou has been with for the Joint Services Health Unit since October 2018. She has been engaged with Darwin Project Addressing drivers of ecological change in Lake Akrotiri SBA, Cyprus through capacity building workshops and partnership throughout her master's degree research project. She has worked towards developing and testing the pollinator monitoring scheme of Kypros for www.ris-ky.eu and she has also been assessing the impacts that different habitat types and land uses have on biodiversity.

Her focus has been on the effects of non-native plant species on biodiversity and ecosystem function. Miss Angelidou has worked with the Akrotiri communities to implement a citizen science protocol for assessing the abundance of flower insect visitors (pollinators). Through evaluating and refining the approach, in conjunction with the Darwin project team and the teachers within the Akrotiri Environmental Education Centre, she has demonstrated this as an approach for assessing pollination services. Miss Angelidou was recently awarded the highest grade for her master's thesis on this research.

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

Invasive Non-Native Species, climate and land use change, eutrophication, illegal hunting, drought, forest fires, urbanisation and the expansion of the road networks are leading to biodiversity loss and changes to ecosystems across Cyprus including the Sovereign Base Areas. The Akrotiri wetlands and surrounding habitats are no exception. Ongoing research through the Darwin Plus project Addressing drivers of ecological change in Lake Akrotiri SBA, Cyprus focuses on monitoring and understanding drivers of change in the Akrotiri wetlands. The fellowship proposed here would complement this research and aim to quantify the ecosystem services provided by this important wetland and how different drivers (including urbanisation, invasive species and climate change) will impact these benefits to people. The fellowship will allow testing and adapting emerging approaches for such an assessment. Additionally the fellowship would provide an opportunity to extend the Flower-Insect Timed Count protocol to other habitats across the SBAs through increased community engagement. Research undertaken through the fellowship will:

1. Identify the indirect (underlying causes) and direct (pressures) drivers of biodiversity and ecosystem change around the Akrotiri wetland
2. Document the ecosystem services relevant to the Akrotiri wetland using various approaches including IPBES Nature's Contributions to People and CICES
3. Apply and test TESSA, an expert-based modelling Toolkit for Ecosystem Service Site-based Assessment and if it works well for the case of Akrotiri she will communicate the results to all relevant stakeholders in Akrotiri
4. Consider the potential (dependent on data availability but highlighting evidence gaps) to model the consequences for Nature's Contributions to People for the different drivers by adopting different modelling approaches as suggested by IPBES in through three modelling approaches:
 - Correlative models
 - Process based models and
 - Expert-Based models in order to assess and model ecosystem services

All results will be communicated to relevant stakeholders.

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

Ms Angelidou will be responsible for undertaking the research under the leadership of Professor Helen Roy (Centre for Ecology & Hydrology (CEH)), Dr Angeliki Martinou (JSU) and Dr Francesca Mancini (CEH). The co-supervisors have extensive experience of delivering collaborative projects and will mentor Ms Angelidou to develop leadership and project management skills. The team (co-supervisors and Ms Angelidou) will meet on a monthly basis (through Skype) to assess progress and discuss next steps with Dr. Martinou providing day-to-day supervision at the JSU.

Ms Angelidou will visit the CEH three times during the fellowship (Dr Mancini and Professor Roy will visit

JSHU twice through the fellowship). The visits will provide her with the opportunity to work with Professor Roy and ecological modellers (particularly Dr Mancini) to develop her capacity for using such approaches. Additionally she will meet with experts within CEH and CABI who have expertise in quantifying ecosystem services. Ms Angelidou will report on the outcomes of these visits through a paper outlining the barriers and opportunities for comprehensively assessing Akrotiri wetlands within the Nature's Contribution to People framework. In conjunction with this component of the study, Ms Angelidou will continue to build capacity for monitoring pollinating insects through citizen science with the Akrotiri communities. This will provide a unique opportunity to raise awareness of the other important ecosystem services of the Akrotiri wetland. Evaluation will be an important component of the project and Ms Angelidou will develop appropriate methods to capture feedback on the outputs delivered throughout the project. She will collaboratively develop dissemination materials with the Akrotiri community to raise awareness of ecosystem services relevant to the wetland and consider the potential for delivery of the approaches in other UK OTs.

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 innovative and collaborative Fellowship contributes to the specified priority issues for Round 8; specifically addressing two of these priorities 1) with invasive non-native species conservation and 2) with the restoration and wise use of wetlands.

Wetland ecosystems are part of our natural wealth. At a worldwide scale they provide us with services worth trillions of US dollars every year – entirely free of charge – making a vital contribution to human health and well-being. With the global population set to increase to nine billion by 2050, increasing pressure on water resources and the threats posed by climate change, the need to maximise these benefits has never been more urgent. The study proposed here will provide the first detailed assessment of the ecosystem services of the Akrotiri wetland and begin the process of predicting the effects of drivers of change such as biological invasions and climate change on these. Ms Angelidou and co-supervisors will ensure transfer of knowledge with reports from the fellowship made accessible to all OTs including specific guidance, relevant to other regions, on implementing approaches to assess ecosystem services including the pollinator monitoring scheme (citizen science). Additionally Ms Angelidou will ensure communication of her work to SBAs and Cypriot authorities, public organisations and other stakeholders through a dissemination event at the Akrotiri Environmental Education Centre. The co-supervisors will guide Ms Angelidou in publication of high quality and scientific outputs. Ultimately the Fellowship will help towards better natural resource management guiding stakeholders and environment officers of SBAs on how to apply and communicate the idea of ecosystem services.

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 his/her UKOT. Will a strategy be developed during the Fellowship to ensure this is achieved?

The project plan includes a strategy to ensure the Fellow will utilise, promote and disseminate the outcomes of the fellowship. The citizen science based pollinator monitoring (Flower-Insect Timed Counts) component of the study will provide an effective way of raising awareness with the Akrotiri community. The report produced by the Fellow, including guidance, relevant to other regions, on implementing approaches to assess ecosystem services will be widely disseminated (through a project website and Darwin

Newsletters etc). The Fellow will lead a dissemination event at the Akrotiri Environmental Education Centre to report on her findings and provide the opportunity for feedback from the community and other stakeholders. A summary of these discussions with key recommendations will be included with the strategy to achieve legacy. All data will be published openly and with appropriate documentation. Throughout the fellowship Ms Angelidou will consider opportunities for knowledge exchange to other UK Overseas Territories and will report on these as key recommendations. Additionally Ms Angelidou will be guided by her co-supervisors to deliver high quality scientific outputs including peer-reviewed publications alongside which blog posts and press releases will be published to ensure wide accessibility.

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 wetland, Ramsar site, is currently under tremendous pressure from urbanization, biological invasions and climate change https://sbaadministration.org/home/docs/eco/20121002_AKI_PEN_MGT_PLAN.pdf. The proposed fellowship will address all these drivers and their impact on the provision of ecosystem services. This project will highlight the importance of the environmental features of Akrotiri Peninsula included in the Ramsar and Special Protection Area designations for Akrotiri and the Akrotiri Special Area of Conservation by applying an anthropocentric approach, that of ecosystem services, and will communicate the outcomes widely to relevant stakeholders and members of the public. The current fellowship will strengthen the engagement and interaction between the UK and the Sovereign Base Areas in Cyprus and also in the long term will contribute to the White Paper (2012), The Overseas Territories: security, success and sustainability, which set out the UK's commitment to work with the Territories to address the challenges together. The project can also help towards co-ordinated conservation efforts as the ecosystem service assessment approach (and the pollinator monitoring methods) that will be developed will have relevance to other UK Overseas Territories.

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 his or her own territory.

The fellowship proposal has been co-created with the proposed Fellow. Dr Martinou, Dr Mancini and Professor Helen Roy co-supervised Ms Angelidou's master's research and it was from this that concept of this proposal developed. Professor Roy is the principal investigator of the Darwin Plus project Addressing drivers of ecological change in Lake Akrotiri SBA, Cyprus and, alongside the other co-supervisors, has provided insights into priorities linking to this ongoing research.

Throughout the fellowship Ms Angelidou will have to engage with a number of stakeholders' from the SBAs and beyond (Republic of Cyprus) and collate information regarding the ecosystem services provided by the different habitat types across the Akrotiri wetland. In addition she will work together with the Ministry of Education and teachers of the Akrotiri Environmental Education Centre. Ms Angelidou has already established links with various stakeholders and organisations including Officers from the Ministry of Education as well as with members of the public and she will maintain and expand these collaborations.

The Fellow will have opportunities to collaborate with Dr Richard Shaw (CABI) and Dr Beth Purse (CEH) to consider approaches for documenting and modelling Nature's Contributions to People

Q15. Where will the Fellow be based?

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

The fellowship involves collaboration among experts based at the UK Centre for Ecology & Hydrology (CEH, Wallingford, UK), Joint Services Health Unit (British Force Cyprus, Akrotiri Headquarters) and the Akrotiri Education and Environmental Centre (Akrotiri, Cyprus). Ms Angelidou will focus her studies on the Akrotiri wetland and accordingly be based at the Joint Services Health Unit and Akrotiri Education and Environmental Centre but with regular contact with the UK Centre for Ecology & Hydrology including three visits to acquire and implement modelling skills alongside approaches required to quantify ecosystem services. The first visit to CEH will be at the start of the fellowship providing an opportunity for Ms Angelidou to work alongside natural capital experts and additionally to meet other experts in the UK for example in CABI. Ms Angelidou will then implement the research programme at Lake Akrotiri over the following 11 months before returning to the CEH to undertake detailed analysis of her collated dataset. She will focus on dissemination events including implementation of the pollinator monitoring (citizen science) to raise awareness and exchange knowledge throughout and her final visit with CEH will be to conclude reporting and publication of dissemination materials.

Section 7 - Programme of Work & Funding


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

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


[Fellowship Implementation Timetable Template](#)

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


Once you have completed your implementation timetable please upload it using the file upload tool below

 [darwin-plus-round8-fellowship-imp-timetable \(](#)

[1\)](#)

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Q17. Costs


Using UK Government Financial Years (i.e. April 2020 – March 2021 etc.), please provide details of the costs associated with this Fellowship in the budget template provided below.

[Darwin Plus Fellowship Budget Template](#)

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

 [darwin-plus-round8-fellowship-budget Final](#)

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 xlsx 28.47 KB

Q18. Other Sources of funding: provide details and amounts

Date applied for	Donor Organisation	Amount (include currency)	Comments (including confirmed/unconfirmed)
25 November 2019	JSHU	████ euro	Time in kind supervision and research contribution
25 November 2019	JSHU	████ euro	Research technical support
<i>No Response</i>	<i>No Response</i>	<i>No Response</i>	<i>No Response</i>
<i>No Response</i>	<i>No Response</i>	<i>No Response</i>	<i>No Response</i>

Section 8 - Certification

Certification

On behalf of the

Company

of

UK Centre for Ecology & Hydrology

I apply for a grant of

£29,460.00

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 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

Jack O'Brien

Position in Organisation

Research Contracts Advisor

Signed [Helen Roy Fellowship Plus 2019](#) 25/11/2019 15:13:26 pdf 33.19 KB**Dated**

25 November 2019

Section 9 - Submission Checklist

I have read the Guidance documents, including the "Guidance Notes for Applicants" and "Finance Guidance". Checked

I have provided actual start and end dates for the Fellowship. Checked

I have read the current Terms and Conditions for this fund. Checked

I have provided a budget based on UK government financial years i.e. 1 April - 31 March. Checked

I have checked that the budget is complete, correctly adds up and have included the correct final total at Q6. Checked

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

I have included a 1 page CV for the proposed Fellow and the experts listed in Q8 as one PDF document, or provided an explanation of why not. Checked

I have included a letter of support from the applicant organisation, training organisation (if different from applicant org) and the relevant OT Government, or provided an explanation of why 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 GOV.UK. Checked

We would like to keep in touch!

Please check this box if you would be happy for the lead applicant (Flexi-Grant Account Holder) and project leader (if different) to be added to our mailing list. Through our mailing list we share updates on upcoming and current application rounds under the Darwin Initiative, 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 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).