

Applicant: **Office, Research**
Organisation: **The University of Gibraltar**
Funding Sought: **£99,390.00**

DPR13PS\1043

Building skills & capacity to monitor microscopic marine life, Gibraltar.

Plankton, algae and fish larvae are useful indicators of ecosystem complexity, environmental health and water quality. The small size, fleeting life-stages and environmental sensitivity of these organisms increases their ability to respond rapidly to environmental change. Regular monitoring aids environmental management by helping to identify pollution, invasive species, Harmful Algal Blooms and climate change effects. This project seeks to build local capability and capacity by expanding existing protocols for monitoring microscopic marine organisms and linking these with public health objectives

PRIMARY APPLICANT DETAILS

Name		Research
Surname		Office
Website		
Tel (Work)		
Email (Work)		
Address		

DPR13PS\1043

Building skills & capacity to monitor microscopic marine life, Gibraltar.

Section 1 - Contact Details

PRIMARY APPLICANT DETAILS

Name	Research
Surname	Office
Website	https://www.unigib.edu.gi/
Tel (Work)	+
Email (Work)	
Address	

GMS ORGANISATION

Type	Organisation
Name	The University of Gibraltar
Phone (Work)	+
Email (Work)	
Website (Work)	
Address	

Section 2 - Title, Dates & Budget Summary

Q3. Title

Building skills & capacity to monitor microscopic marine life, Gibraltar.

Please attach a cover letter as a PDF document.

-  [DPR13PS-1043 Cover Letter](#)
-  23/09/2024
-  13:31:04
-  pdf 170.17 KB

Q4a. Is this a resubmission of a previously unsuccessful application to Darwin Plus Fellowships, as this scheme was previously called?

☒ No

Q5. Project beneficiary/group of beneficiaries

☒ Individual

Provide the name and official address of proposed Darwin Plus People & Skills beneficiary

Name	Sarah Alvarez
Address	University of Gibraltar, Europa Point Campus, Gibraltar
Email	

Q6. Summary of proposed project

Plankton, algae and fish larvae are useful indicators of ecosystem complexity, environmental health and water quality. The small size, fleeting life-stages and environmental sensitivity of these organisms increases their ability to respond rapidly to environmental change. Regular monitoring aids environmental management by helping to identify pollution, invasive species, Harmful Algal Blooms and climate change effects. This project seeks to build local capability and capacity by expanding existing protocols for monitoring microscopic marine organisms and linking these with public health objectives

Q7. UKOT involved

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

☒ Gibraltar

* if you have indicated a territory group with an asterisk, please give detail on which territories you are working on here:

No Response

Q7b. Have you included a letter of support from the relevant OT Government(s) and/or OT-based civil society organisation?

☒ Yes

Please provide a combined PDF of all letters of support

 [DPR13PS-1043 - Letter of Support - DESCCH](#)

 23/09/2024

 16:40:43

 pdf 23.4 KB

Q8. Project dates

Start date:

01 April 2025

End date:

31 March 2027

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

24 months

Q9. Budget summary

2025/2026	2026/27	2027/2028	Total
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Darwin Plus				£
funding request (1 Apr - 31 Mar)	54,300.00	45,090	0.00	99,390.00

Please complete the template below which provides the Budget for this application.

 [DPR13PS-1043 Budget](#)
 23/09/2024
 18:11:49
 xlsx 38.06 KB

Section 3 - Principals

Q10. Principals in the project

Please give the details of the individuals from the Lead Organisation (and other organisations if relevant) who would be directly involved in supervising/ working with the beneficiary/ies.

Details	Project Leader	Other Expert	Other Expert	Other Expert
Surname	Dissanayake	Fa	Warr	No Response
Forename(s)	Awantha	Darren	Stephen	No Response
Post held	Head of School for Marine and Environmental Science	Director of Academic Programmes and Research	Chief Executive Officer	No Response
Organisation	The University of Gibraltar	The University of Gibraltar	The Department of the Environment, Sustainability, Climate Change and Heritage	No Response
Email	[REDACTED]			[REDACTED]

Do you require more fields?

☒ No

Please provide a combined 1-page CV for each of these named individuals and remember to include the beneficiary/ies CVs as part of the PDF.

 [DPR13PS-1043 - Combined CVs](#)
 23/09/2024
 15:13:27
 pdf 1.02 MB

Section 4 - Aims, Activities & Achievements

Q11. Describe briefly the aims, activities and achievements of the employing organisation(s) of the proposed beneficiary/ies.

The University of Gibraltar (UniGib) is a young institution with a vision of 'excellence in teaching, learning and research'. Collaboration is a key part of UniGib's success, with strong links to businesses, government bodies, charitable foundations and other research and educational institutions.

UniGib is actively engaged with the local community and currently undertakes intermittent marine monitoring on behalf of HM Government of Gibraltar. UniGib regularly organises and contributes to public outreach initiatives, including public lectures and an annual 'Research that Benefits Gibraltar' conference, which showcases community-specific projects. Publication of research outputs (peer-reviewed articles, books, datasets, etc.) also broadens UniGib's reach, locally and internationally.

Projects that enhance and protect the local natural environment are intrinsic to UniGib's School of Marine and Environmental Science and the Natural Sciences and Environment research hub. UniGib has successfully led two Darwin Plus Local awards (DPL00044 and DPL00057) and is leading a Darwin Plus Fellowship (DPlus217).

Q12. Describe briefly the current role/s of the proposed beneficiary/ies within their organisation(s) and what relevance this has to one or more of the main themes of Darwin Plus.

This project primarily seeks to build capability and capacity in Gibraltar, but will also address the remaining Darwin Plus themes, albeit indirectly (see Q13c).

Sarah is currently employed (fixed-term) at UniGib as a Teaching & Research Assistant, working within the School of Marine and Environmental Science and Library Information Services. Sarah has a strong background in ocean and earth science, with a focus on microscopic calcifying phytoplankton (coccolithophores), taxonomy, biodiversity and climate change, all of which would directly benefit this project. She has delivered lectures and practical sessions for UniGib's MSc in Marine Science and Climate Change, and regularly marks MSc coursework and research projects. Sarah also assisted a recent Darwin Plus Local project (DPL00057) that assessed the feasibility of restoring oyster populations to Gibraltar.

This project would enable Sarah to apply her knowledge and experience to develop the skills and techniques needed to deliver its objectives, including Gibraltar-specific plankton taxonomy, sampling protocols and mitigation techniques. Much of this expertise is currently limited in Gibraltar, with samples intermittently sent out-of-territory for analysis. As such, this project would fulfil a local need by investing in people & skills to help establish a valuable and sustainable (potentially semi-automated) in-territory service.

Section 5 - Outcomes & Objectives

Q13. Provide a concept note for the project. This should include:

Q13a. A clear outline of the aim and objectives of the project.

This project would provide additional useful information on the prevalence, abundance and diversity of phytoplankton, zooplankton, algae (including Harmful Algal Blooms); fish larvae, invasive species and even microplastics, all within one sampling process.

Aim: Expand current monitoring of microscopic organisms within Gibraltar's marine environment and assist with development of response strategies for potentially harmful conditions.

Objectives:

O1: Collate existing data and address critical gaps. Achieved by:

- Collating existing data and implementing procedures for entering new data
- Sample surface water at strategic locations (quarterly, complimentary to statutory sampling)
- Suitably prepare and analyse samples for phytoplankton, zooplankton, algae, fish larvae, etc.
- Consulting marine monitoring experts.

O2: Establish an electronic database and training set of recorded organisms. We expect this to utilise Biigle (a free web service for rapid annotation of images/videos, designed for marine environmental monitoring and capable of machine

learning). Achieved by:

- Examining and imaging specimens with light microscopes available at UniGib and adding taxonomic annotation to images using Biigle
- Building a training set of annotated images
- Collaborating with experts experienced in relevant taxonomy and data management
- Testing the potential for machine learning and semi-automatic specimen recognition within Biigle.

O3: Assist DESCCH with dissemination of scientific and public health information related to microscopic marine organisms (e.g., Harmful Algal Blooms) that could impact Gibraltar's coastline now, or in the near future. Achieved by:

- Liaising with DESCCH
- Determining the most likely harmful conditions based on available data
- Creating relevant risk matrices and factsheets
- Investigating established protocols and collaborating with experts (Community of Practice) in this aspect of public health to help build a reporting and response framework for implementation.

O4: Build support within key stakeholder groups (including public health operatives), NGOs and the local community through outreach initiatives.

Q13b. The role of the Project Leader, Lead Organisation and the beneficiary/ies, and others where relevant.

Lead Organisation: The University of Gibraltar (UniGib) will host the project and provide the necessary infrastructure and support, including information services and laboratory access. UniGib will help to build local capability and capacity and will engage the University's MSc in Marine Science & Climate Change programme and the DESCCH to help ensure the project's legacy beyond its two-year duration (see Q14).

Project Leader: Dr Awantha Dissanayake is Head of School for Marine and Environmental Science at UniGib. He is an experienced researcher with a background in marine biology and over 24 years of experience in laboratory and field research. Awantha will oversee and supervise the project, providing expert guidance, local knowledge and project management experience throughout.

Project Participants: Dr Darren Fa is Director of Academic Programmes and Research at UniGib. Darren is a specialist in marine ecology and biology, particularly on aspects of diversity and conservation. He has participated in, and led, several internationally-funded research projects, as well as Gibraltar-based initiatives. He is a European Commission Expert on Environment and Higher Education. Stephen Warr is Chief Executive Officer of DESCCH and has a wealth of experience working within Gibraltar's marine environment. He was instrumental to the establishment and implementation of Gibraltar's marine surveillance and monitoring programme. Both Darren and Stephen have valuable and highly relevant experience, enabling them to provide expert guidance and advice for this project.

Beneficiary: Under the guidance of UniGib and DESCCH, Dr Sarah Alvarez (beneficiary) will be responsible for the day-to-day running of the project in line with its objectives and deliverables. Sarah will lead on project coordination and reporting, supported by the project team.

The University, Awantha, Darren and Stephen will facilitate close collaboration with DESCCH, other experts and key stakeholders throughout the project, as relevant.

Q13c. Where appropriate, how the project will contribute towards one or more of the four themes of Darwin Plus in the OTs i.e. what the expected outcome of the project will be

This project primarily seeks to build capability and capacity within Gibraltar to help monitor environmental quality and respond appropriately to harmful conditions. It will provide a framework for recording biodiversity of microscopic marine organisms and their response to future climate change.

Capability and Capacity Building: This project seeks to build skills locally to expand monitoring of microscopic marine organisms in Gibraltar. Sarah will learn from experts (local and international, see Q16) to develop effective protocols and preliminary baseline data that can be used to explore the potential for semi-automated sample analysis. If awarded, this project will provide training and professional development opportunities for Sarah, who will share the insight gained by providing a formal report for UniGib and DESCCH, and by delivering presentations and necessary guidance for DESCCH

personnel, key NGOs and local stakeholders, as needed.

Environmental quality, biodiversity and climate change: This project will collate and enhance in-territory knowledge, tools and skills to monitor aspects of marine environmental quality beyond legislative requirement. It will expand our awareness of local marine biodiversity within the groups that underpin marine food-webs, thereby contributing toward baseline data for future comparison. This is time-sensitive and highly relevant, given global evidence for potential biodiversity loss and increased prevalence of Harmful Algal Blooms (HABs) that can be associated with climate change and coastal warming.

Expected outcomes: Improved local capability and capacity; a framework for reporting and recording presence and diversity of key microscopic organisms within Gibraltar's marine environment; taxonomic guidelines; a suitable training set for semi-automated sample analysis and assessment of its potential use; guidance on appropriate response to harmful conditions.

Section 6 - Legacy & Collaboration

Q14. Legacy

Provide information on how the beneficiary/ies will utilise, promote and disseminate the benefits of the project. Will a strategy be developed during the project to ensure this is achieved?

Expansion of microscopic marine organism monitoring and reporting protocols in Gibraltar will support long-term monitoring efforts, and provide a training-set with which to investigate the potential for semi-automated sample analysis. It is expected that future monitoring will be fulfilled by DESCCH, in-line with statutory requirements. The project will develop feedback systems and pathways for reporting significant results to enable timely and appropriate action where necessary (e.g., in case of HABs, invasive species, pollution, etc.).

Sarah will develop a related practical session for UniGib's MSc Marine Science & Climate Change programme, thereby investing in future generations of marine scientists. The project's relevance for environmental priorities (Q15) is likely to interest MSc students, and some have previously addressed similar themes in their dissertations. Students will be well-placed to contribute to the data (overseen by Sarah and Awantha, Project Leader & Head of School) to ensure that it remains current. The data will also be available for MSc projects.

Broader community engagement efforts will include a project webpage, public presentations and local press releases (e.g., social media, local news outlets, television and radio), lead by UniGib's Marketing team in collaboration with DESCCH.

Q15. Priorities

How will the project assist the OT's environmental priorities? Please refer to international or national environmental conventions, treaties, agreements, strategies and/or action plans relevant to the OT as appropriate.

This project addresses:

Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean and its Protocols (Barcelona Convention).

Marine Strategy Framework Directive (MSFD): Transposed into local law under the Marine Strategy Regulations 2011, the MSFD ensures sustainable use of marine waters and Good Environmental Status (GES) of European seas. This encompasses the Monitoring Programme for BGTW, which monitors regimes for specific descriptors (e.g., relating to biodiversity, eutrophication, etc.).

Marine Climate Change Impacts Partnership (MCCIP), the primary independent source of marine and coastal climate change evidence and advice in the UK, supporting UK Overseas Territories. This project would support reporting for Priority 1 from the Mediterranean Report Card (Dissanayake et al., 2021, MCCIP Science Review 2021, doi: 10.14465/2021.orc03.med) which addresses ecosystem function and food webs.

Water Framework Directive (WFD): The WFD aims to achieve Good Ecological and Good Chemical Status.

Gibraltar's Climate Change Bill 2019 & Gibraltar Climate Change Strategy: Requires policies, programmes and projects to contribute to the mitigation of, and adaption to, climate change.

Convention on Biological Diversity (CBD) – Article 8(f): rehabilitate and restore degraded ecosystems and promote the recovery of threatened species through the development and implementation of plans and management strategies.

Q16. Collaboration

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

This application has been initiated by the Beneficiary, who drafted the proposal in collaboration with the Project Lead, Other Experts and DESCCH. The Beneficiary approached Stephen Warr (CEO, DESCCH) directly while in the planning stages to discuss the project and its outputs to ensure that it addresses real needs within Gibraltar. All feedback has been welcomed and incorporated herein, notably the inclusion of Objective O3, to provide response guidance for detection of harmful conditions. This collaborative effort will continue throughout the project, with individuals fulfilling the roles outlined in Q13b.

The beneficiary has also contacted leading UK-based entities to arrange in-principle opportunities for training during this project. This will include bringing expert(s) to visit Gibraltar, which will enable them to gain familiarity with the unique marine environment and facilities available, which will be necessary for provision of relevant advice on data collation and laboratory techniques. It will also include arrangements for Sarah to visit a UK-based laboratory to learn and verify local taxonomy, as well as observing how similar data are processed in larger-scale projects.

Q17. Where will the beneficiary/ies be based?

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

Sarah will carry out this project in Gibraltar.

Fieldwork will take place within British Gibraltar Territorial Waters (BGTW). Samples will be processed and analysed at the University of Gibraltar's laboratory (Europa Point Campus) and stored on-site.

Talks and outreach activities will be delivered at the University, one of its associate campuses or at another venue with which the University has an existing Memorandum of Understanding (MOU, formal agreement), e.g., the John Mackintosh Hall, Gibraltar.

Sarah will visit DESCCH (minimum 1 day), the Environmental Agency (minimum 1 day) and a UK-based centre (e.g., Continuous Plankton Recorder (CPR) Survey, Plymouth) during the course of the project to learn procedures and taxonomy that will be useful for the project and could be implemented in Gibraltar. She will also visit a European institution to observe use of a ZooScan (high-resolution scanner technology for imaging zooplankton) to assess whether this equipment is a viable investment for future use in Gibraltar.

Section 7 - Workplan

Q18. Safeguarding

All projects funded under the Biodiversity Challenge Funds must ensure proactive action is taken to promote the welfare and protect all individuals involved in the project (staff, implementing partners, the public and beneficiaries) from harm. In order to provide assurance of this, projects are required to have specific procedures and policies in operation.

Please upload the following mandatory policies:

- **Safeguarding and/or PSEAH Policy**: including a statement of commitment to safeguarding and a zero tolerance to inaction statement on bullying, harassment and sexual exploitation and abuse. Policy should include a commitment

to either Core Humanitarian Standard (CHS), IASC minimum operating standards for PSEA MOS-PSEA) or CAPSEAH minimum standards.

- **Whistleblowing Policy**: which details a clear process for dealing with concerns raised and protects whistle blowers from reprisals.
- **Code of Conduct**: which sets out clear expectations of behaviours – inside and outside the workplace – for staff and volunteers involved in the project and makes clear what will happen in the event of non-compliance or breach of these standards, up to and including dismissal.
- **Safety and Security Policy or Security Plan**: that outlines a plan on how to mitigate and respond to potential health, safety and security threats.

If any of these policies are integrated into a broader policy document or handbook, please upload just the relevant or equivalent sub-sections to the above policies, with (unofficial) English translations where needed.

Please outline how your project will ensure:

1. beneficiaries, the public, implementing partners, and staff are made aware of your safeguarding commitment and how they can confidentially raise a concern,
2. safeguarding issues are investigated, recorded and what disciplinary procedures are in place when allegations and complaints are upheld,
3. you will ensure project partners also meet these standards and policies.

Indicate which minimum standard protocol your project follows and how you meet those minimum standards, i.e. CAPSEAH, CHS, IASC MOS-PSEA. If your approach is currently limited or in the early stages of development, please clearly set out your plans address this.

UniGib is committed to promoting the welfare and protection of individuals involved in all areas of its work. Appropriate policy statements are available on UniGib's website (<https://www.unigib.edu.gi/policies-a-z/>), and we proactively engage with partners and other organisations/individuals to ensure they are equipped to adhere to policy requirements.

The Human Resources and Employee Handbook is a reference document that explains the Terms and Conditions of Employment. It outlines the University's Code of Conduct and Disciplinary Procedure for misconduct (Chapters 24 to 30), which follow the ACAS Code of Practice. The University asserts its zero tolerance of bullying, harassment, sexual exploitation and abuse, outlined in the Equality and Diversity Policy Statement and Bullying at Work Policy. UniGib is also committed to maintaining the highest standards to protect and safeguard the wellbeing and safety of children and at-risk adults involved in any University-led activities, outlined in the Safeguarding children and at-risk adults Policy.

The HR and Employee Handbook includes a Whistleblowing Policy (Chapter 36), which states how employees should raise concerns over wrongdoing/malpractice. Whistleblowing is also addressed in the University's Financial Regulations (Chapter 8), along with a financial code of conduct.

UniGib's Health and Safety and Security policies address matters of Health and Safety and personal security of all staff, students and visitors to University campuses.

This project will ensure that beneficiaries, the public, implementing partners and staff are made aware of the University's safeguarding commitment upon engagement and of how they can confidentially raise a concern. This information can be delivered when collaborative arrangements are being established. Attendance at all public engagement events will be contingent on advance registration and acceptance of an appropriate code of conduct for the occasion. Safeguarding issues will be investigated and recorded in-line with University policy and disciplinary procedures will be actioned when allegations and complaints are upheld.

Q19. Workplan

Provide a project workplan that shows the key milestones in project activities.

 [DPR13PS-1043 Plankton workplan](#)

 23/09/2024

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 docx 31.28 KB

Section 8 - Certification

Certification

On behalf of the

Company

of

The University of Gibraltar

I apply for a grant of

£99,390.00

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

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

- I enclose one page CVs for the beneficiary/ies, project principals, cover letter, budget, workplan, letter(s) of support, financial evidence (see guidance), and Safeguarding and associated policies as requested in the Guidance Notes.

Checked

Name	Darren Fa
Position in Organisation	Director of Academic Programmes and Research
Signed	 DF Signature.docx  23/09/2024  15:19:22  pdf 201.13 KB
Dated	23 September 2024

Please attach the requested signed Financial Evidence.

 Annual Report 22-23 v16.signed  20/09/2024  15:14:17  pdf 9.26 MB	 Annual Report and Financial Statements 21 -22 (Part 2).  20/09/2024  15:11:36  pdf 9.21 MB
 Annual Report and Financial Statements 21-22 (Part 1).  20/09/2024  15:11:29  pdf 9.36 MB	

Please upload the Lead Organisation's Safeguarding and associated policies as a PDF

 [2023-09-20 UoG HR and Employee Handbook FINAL](#)
 20/09/2024
 15:15:01
 pdf 1.97 MB

 [B3.Bullying-at-Work-PolicyFINAL20240529](#)
 20/09/2024
 15:14:57
 pdf 734.55 KB

 [E1.Equality-and-Diversity-Policy-StatementFINAL20221115](#)
 20/09/2024
 15:14:52
 pdf 808.89 KB

 [F1.Financial-Regulations-FINAL-20230524](#)
 20/09/2024
 15:14:48
 pdf 1.03 MB

 [H1.Health-Safety-PolicyFINAL20240529](#)
 20/09/2024
 15:14:44
 pdf 1.45 MB

 [S3.Security-PolicyFINAL20230208](#)
 20/09/2024
 15:14:39
 pdf 1.06 MB

 [S7.Safeguarding-policy-FINAL20221220](#)
 20/09/2024
 15:14:35
 pdf 843.86 KB

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 the 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 provided the relevant letters of support, cover letter, workplan, and CVs with this application.	Checked
I have attached a copy of the Lead Organisation’s Safeguarding Policy, Whistleblowing Policy, Code of Conduct and Safety and Security Policy or Security Plan (Question 18).	Checked
The additional supporting evidence is in line with the requested evidence, amounts to a maximum of 5 sides of A4, and is combined as a single PDF.	Checked
(If copying and pasting into Flexi-Grant) I have checked that all my responses have been successfully copied into the online application form	Checked
I have checked the Darwin Plus website immediately prior to submission to ensure there are no late updates.	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).