
DPR10S2\1032

Multi-Purpose Soil Survey: informing environmental management and climate change mitigation

The lack of digital soil maps for the BVI is a critical gap in datasets needed for environmental management. This project will inform environmental managers about locations of degraded, erosive, hazardous, polluted or vulnerable soils. Mapping soils and their biodiversity will improve knowledge of geo-ecological processes, providing a baseline dataset from which climate change impacts can be assessed. Local capacity will be strengthened via a soil laboratory hosted by the BVI's community college, with training in soil survey and analysis.

Section 1 - Contact Details

PRIMARY APPLICANT DETAILS

Title	Prof
Name	Richard
Surname	Teeuw
Organisation	University of Portsmouth
Website (Work)	[REDACTED]
Tel (Work)	[REDACTED]
Email (Work)	[REDACTED]
Address	[REDACTED]

GMS ORGANISATION

Type	General
Name	University of Portsmouth
Phone (Work)	[REDACTED]
Email (Work)	[REDACTED]
Address	[REDACTED]

Section 2 - Title, Dates & Budget Summary

Q3. Project title

Multi-Purpose Soil Survey: informing environmental management and climate change mitigation

What was your Stage 1 reference number? e.g. DPR10S1\1123

DPR10S1\1013

Q4. UKOT(s)

Which UK Overseas Territory(ies) will your project be working in?

British Virgin Islands (BVI)

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

No Response

Q4b. In addition to the UKOTs you have indicated, will your project directly benefit any other Territories or country(ies)?

No

Q5. Project dates

Start date:

01 May 2022

End date:

31 March 2024

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

1 year, 11 months

Q6. Budget summary

Year:	2022/23	2023/24	2024/25	Total request
Darwin funding request (Apr - Mar)	£109,295.00	£51,605.00	£0.00	£ 160,900.00

Q6a. Do you have proposed matched funding arrangements?

Yes

What matched funding arrangements are proposed?

University of Portsmouth: [REDACTED] of overheads and staff cost for the Advisory Committee, provided as matched funding.

British Virgin Islands: [REDACTED] of in-kind contribution, via staff time for the project Advisory Committee, use of vehicles, vessels and support staff for local island transport, BVI staff per diems on island visits, provision of office administrative support and desk space, provision of space for soil laboratory & soil storage, conference room facilities and refreshments for workshops, photography and online advertising for press releases..

Total matched funding: [REDACTED]

Q6b. Proposed matched funding as % of total project cost (total cost is the Darwin request plus other funding required to run the project).

Q6c. If you have a significant amount of unconfirmed matched funding, please clarify how you fund the project if you don't manage to secure this?

No Response

Section 3 - Project Summary and Conventions

Q7. Summary of Project

Please provide a brief summary of your project, its aims, and the key activities you plan to undertake. Please note that if you are successful, this wording may be used by Defra in communications.

Please write this summary for a non-technical audience.

The lack of digital soil maps for the BVI is a critical gap in datasets needed for environmental management. This project will inform environmental managers about locations of degraded, erosive, hazardous, polluted or vulnerable soils. Mapping soils and their biodiversity will improve knowledge of geo-ecological processes, providing a baseline dataset from which climate change impacts can be assessed. Local capacity will be strengthened via a soil laboratory hosted by the BVI's community college, with training in soil survey and analysis.

Q8. Environmental Conventions, Treaties and Agreements

Please detail how your project will contribute to the aims of the agreement(s) your project is targeting. What key OT Government priorities and themes will it address and how? You should refer to Articles or Programmes of Work here. You should also consider local, territory specific agreements and action plans here.

Letters of support from UKOT Government partners/stakeholders should also make clear reference to the agreements/action plans your project is contributing towards.

The proposed Multi-Purpose Soil Survey project will assist the BVI government with responding to the following international treaties:

- the Convention on Biological Diversity (CBD);
- the Nagoya Protocol on Access and Benefit Sharing (ABS);
- the United Nations Framework Convention on Climate Change (UNFCCC);
- the Ramsar Convention on Wetlands
- St. George's Declaration of Principles for Environmental Sustainability in the OECS;
- Protocol Concerning Pollution from Land-Based Sources and Activities (LBS Protocol)
- UN Sustainable Development Goals (particularly SDGs 2, 6, 13, 15 & 17).

The need for a BVI soil survey has been highlighted within the BVI Government's Biodiversity Action Plan. The soil survey data is very relevant for the BVI Territorial Multi-hazard Mitigation and Resilience Framework, the BVI Climate Change Policy and Plan, and the BVI National Development Plan. The BVI soil survey will also aid decision making with several activities of the Caribbean Disaster Management Strategy (2019-2025). The Caribbean Disaster & Emergency Management Agency's Strategy for 2014-2024 prioritises member states, such as the BVI, developing mitigating activities against climate change impacts on agriculture, food security and land development - the proposed soil survey will provide a critical dataset for developing such mitigation.

Section 4 - Project Partners

Q9. Project Partners

Please list all the partners involved (including the Lead Partner) and explain their roles and responsibilities in the project. Describe the extent of their involvement at all stages, including project development.

This section should illustrate the capacity of partners to be involved in the project. Please provide Letters of Support for the lead partner and each partner or explain why this has not been included.

N.B: There is a file upload button at the bottom of this page for the upload of a cover letter and all letters of support.

Lead Partner name: The University of Portsmouth - Project lead: Professor Richard Teeuw

Website address: <https://www.port.ac.uk/about-us>

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

The University of Portsmouth (UoP) regularly manages large multi-disciplinary international projects, including a Darwin project during 2000-2002. UoP Finance officers will provide financial oversight and lead financial reporting of the project. Professor Richard Teeuw will lead the project and be responsible for partner engagement and project reporting, including providing quarterly reports to the project Advisory Committee. Prof Teeuw has managed multidisciplinary teams of scientists on projects in the Caribbean (primarily Dominica, with RGS and NERC funding), Colombia, and the South Pacific. This project has developed out of links between UoP and the BVI Department for Disaster Management, which has hosted an annual UoP MSc student placement since 2011, facilitated by Prof Teeuw. The UoP team will work closely with our 7 BVI partner organisations, leading the soil surveys, providing equipment for a BVI soil laboratory, with technical training on soil analysis and GIS mapping applications.

Have you included a Letter of Support from this organisation?

Yes

Have you provided a cover letter to address your Stage 1 feedback?

Yes

Do you have partners involved in the Project?

Yes

1. Partner Name:

BVI Department of Disaster Management - Contact: Ms Melanie Daway, Senior Technical Planning Manager

Website address:

<https://www.bviddm.com>

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

Within the BVI, the Department of Disaster Management (DDM) is the main administrator for the project. The DDM project staff are responsible for liaising with all stakeholders, collecting documentation and data necessary for executing the soil survey. Mr Jasen Penn, DDM Director, will be Co-chair of the project Advisory Committee, with Ms Melanie Daway of DDM recording the minutes of its quarterly meetings. Two DDM employees have been designated for training in soil survey, analysis and mapping, via this project. The soil data and maps produced by the project will be particularly useful for informing BVI Hazard Vulnerability Assessment reports and for developing longer-term climate change adaptation strategies.

Have you included a Letter of Support from this organisation?

Yes

2. Partner Name:	BVI National Parks Trust - Contact: Mrs Nancy Pascoe, NPT Deputy Director.
Website address:	https://www.bvinpt.org
Details (including roles and responsibilities and capacity to engage with the project):	The BVI National Parks Trust (NPT) has over 20 years of experience of successfully working in collaboration with local and international agencies to deliver conservation projects, including many funded by Darwin Plus. The NPT has played a key role, along with the DDM, in liaising with UoP to develop this BVI soil survey project. The Deputy-Director of the NPT, Mrs Nancy Pascoe will be the NPT representative on the project Advisory Committee. Two NPT wardens have been designated for training via this project: in soil survey, soil analysis and mapping. The NPT role in the project is particularly important in year-2, when the focus shifts from the general soil survey, laboratory establishment and mapping of hazardous soil types, to focus on soil biodiversity. The year-2 sampling and soil biodiversity analyses will be guided by the NPT, prioritising recommended sites in BVI National Parks and Tropical Important Plant Areas.
Have you included a Letter of Support from this organisation?	<input checked="" type="radio"/> Yes

3. Partner Name:	H. Lavity Stoutt Community College - Contact: Susan Zaluski, Head of Marine Studies.
Website address:	https://hlsc.org
Details (including roles and responsibilities and capacity to engage with the project):	H. Lavity Stoutt Community College (HLSCC) is the BVI's main higher education institution. The community college has a key role in the project because it has agreed to provide laboratory space designated for soil analysis, housing equipment provided by this project. The soil survey and analysis workshops and training will also be hosted by the college. Designated college staff members will be trained in managing and maintaining the soils labs. Ms Susan Zaluski will represent the HLSCC at the quarterly meetings of the project's Advisory Committee.
Have you included a Letter of Support from this organisation?	<input checked="" type="radio"/> Yes

4. Partner Name:	BVI Environmental Health Division - Contact: Mr Frandy Felix, Environmental Health Officer
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Website address: <https://bvi.gov.vg/departments/environmental-health-division>

Details (including roles and responsibilities and capacity to engage with the project): The BVI Environmental Health Division (EHD) staff will attend training on soil collecting and analysing soils, for a better understanding of waste management issues (e.g. percolation levels and whether soakaways and/or septic tanks can be efficient in a given area). Mr Frandy Felix will represent the EHD at the quarterly meetings of the project Advisory Committee.

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

5. Partner Name: BVI Agriculture and Fisheries Department - Contact: Ms Lesley Maduro, Agricultural Officer.

Website address: <http://www.bvi.gov.vg/departments/department-agriculture-0>

Details (including roles and responsibilities and capacity to engage with the project): The BVI Agriculture and Fisheries Department (AFD) will designate two officers for training in soil collecting and analysis. A priority tasks is to identify infertile soils and lands that are not suitable for cultivation due to adverse soil factors. Ms Lesley Maduro will represent the AFD at the quarterly meetings of the project Advisory Committee.

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

6. Partner Name: BVI Town and Country Planning Department - Contact: Greg Adams, Chief Planner

Website address: <https://bvi.gov.vg/departments/tcp>

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

Two staff members from the Town and Country Planning Department (TCPD) will participate in the soil sample collection, training and GIS-based mapping for determining land suitability. The maps of soil types and associated hazard zones will improve evidence-based decision making and be incorporated into the development application process. Mr Greg Adams will represent the TCPD at the quarterly meetings of the project Advisory Committee.

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

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

Partner Name: BVI Ministry of Natural Resources, Labour & Immigration
Contact: Rozina Norris-Gumbs, GIS Officer (ngumbs@gov.vg)
Website address: <https://bvi.gov.vg/content/ministry-natural-resources-and-labour>

The Ministry of Natural Resources, Labour & Immigration will assist with soil sample collection, analysis and GIS mapping of data to support biodiversity conservation measures, with two staff assigned to the workshop and field-based training. Ms Rozina Norris-Gumbs will represent the Ministry at the quarterly meetings of the project Advisory Committee.

Letter of Support? Yes

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

 [BVI UoP Combined Letters of Support](#)
 10/01/2022
 13:49:59
 pdf 3.19 MB

 [BVI UoP Combined CVs](#)
 10/01/2022
 09:30:03
 pdf 3 MB

 [DPR10S2_1032 Teeuw BVI soils covering letter](#)
 10/01/2022
 08:22:56
 pdf 200.05 KB

Section 5 - Project Staff

Q10. Project Staff

Please identify the key staff on this project, their role and what % of their time they will be working on the project. Further information on who should be classified as key project staff can be found in the guidance.

Please provide 1 page CVs for these staff, or a 1 page job description or Terms of Reference for roles yet to be filled. These should match the names and roles in the budget spreadsheet. If your team is larger than 12 people please review if they are key project staff, or whether you can merge roles (e.g. 'admin and finance support') below, but provide a full table based on this template in the PDF of CVs you provide.

Name (First name, Surname)	Role	Organisation	% time on project	1 page CV or job description attached?
Richard Teeuw	Project Leader	University of Portsmouth	12	Checked
Nasos Argyriou	Co-I: GIS mapping of geodiversity & soils	University of Portsmouth	10	Checked
Fay Cuceiro	Co-I: waste management (soil, water and micro-plastics)	University of Portsmouth	5	Checked
Nick Koor	Co-I: soil geotechnics engineering hazards	University of Portsmouth	5	Unchecked

Do you require more fields?

Yes

Name (First name, Surname)	Role	Organisation	% time on project	1 page CV or job description attached?
Heather Rumble	Co-I: soil microbiota and biodiversity	University of Portsmouth	5	Checked
John Williams	Co-I: waste management (soil, water and SUDS)	University of Portsmouth	5	Checked
Melanie Daway	BVI administrative & soil survey support	BVI Disaster Management Department	9	Checked
Nehassie Chalwell	BVI fieldwork & laboratory support	BVI Disaster Management Department	9	Checked
Jasen Penn	Advisory Committee, Co-chair & BVI admin	BVI Disaster Management Department	1	Checked
Prem Wattage	Advisory Committee, Co-chair	Sabaragamuwa University, Sri Lanka	1	Checked
Mrs Nancy Pascoe	Advisory Committee	BVI National Parks Trust	1	Checked
Ms Susan Zaluski	Advisory Committee	Lavity Stoutt Community College	1	Checked

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

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

No Response

Have you attached all Project staff CVs?

No

If you cannot provide a CV or job description, please explain why not.

Sorry: we have a large project team, plus a large Advisory Committee (with 7 BVI partners represented, plus 2 additional members adding research & project management experience). Consequently there are not sufficient rows for them all in this section.

I have included CVs or job descriptions for all 17 people involved in the project, and a table with the requested details for all of the project staff.

For 3 of the BVI-based members of the Advisory Committee I can only provide their Job Descriptions: Lesley Maduro (Agriculture Dept); Greg Adams (Town & Country Planning) and Frandy Felix (Environmental Health).

Section 6 - Background & Methodology

Q11. Problems the project is trying to address

Please describe the problem your project is trying to address in terms of environment and climate issues in the UKOTs.

For example, what are the specific threats to the environment that the project will attempt to address? Why are they relevant, for whom? How did you identify these problems? How will your proposed project help?

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

Soil mapping is needed for the BVI to achieve greater hazard mitigation and environmental protection (BVI Multi-Hazard Mitigation Resilience Framework, 2020, p.26). The Virgin Islands Climate Change Policy (2012: p.9 & 23) and National Physical Development Plan (2019: p.85 & 104) also recognise the need for soil mapping in forestry and water conservation, biodiversity and restoration, food security and disaster planning.

BVI climate change challenges include increased frequency and magnitude of hurricanes, storm surges, coastal erosion, flooding, extreme rainfall, soil erosion, landslides and debris flows; also, less-predictable growing seasons. Another challenge is from population pressures from increasing resident population and tourists: issues with water supplies, wastewater management and sites for construction (ie, areas not exposed to geohazards, with suitable soils). BVI environmental problems include soil degradation and loss of fertility, with accelerated erosion because of deforestation and land clearance for farming or construction. A problem highlighted by our partners in the BVI Environmental Health Division is sewage pollution from waste management systems that overflow in the rainy season. Information about BVI high-risk soil locations is needed for more effective environmental management or remediation of waste disposal sites. Plastic poses another potential pollution problem that this project will examine, via a pilot study to see if mangrove soils are acting as sinks for micro-plastics.

The impacts of climate change impacts and population pressures vary within the BVI because of its diverse range of bedrock and soil types (ie, its geodiversity), as well as local variations in terrain and vegetation cover. Little is known about links between the BVI's biodiversity with its relatively unknown underlying geodiversity and soil biodiversity. This project will inform that research, as well as contributing to an international problem: a global need for more soil biodiversity data and more trained soil survey staff (Guerra et al., 2020). Information is needed about BVI geodiversity, soil types and soil biodiversity; to inform research into soil-plant linkages and ecosystem functions, as well as potential impacts from climate change.

The inclusion of soil biodiversity within soil surveys is often overlooked, despite its importance in ensuring soil function. Plants protect the topsoil from erosive forces, such as rainfall, and bind soil with their roots. Soil micro-organisms provide structure to soil, providing conditions for successful plant growth and reduce erosion or landslide hazards by binding soil particles. Some soil communities rapidly adapt to changing conditions, improving resilience to changing climatic conditions. The relationship between plants and soil is also crucial in conserving above-ground species, such as plants and the fauna that plants support. There is increasing evidence that many plants form symbiotic associations with the range of soil fauna and fungi, but that those associations are vulnerable to disturbance and can also be perturbed by invasive species. It is therefore of critical importance to examine the organisms present in soils and their function within their specific habitat. There is a lack of understanding of those relationships and a dearth of data from developing countries: this

study will help to fill that knowledge gap

Q12. Methodology

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

- How you have analysed historical and existing initiatives and are building on or taking work already done into account in project design. Please cite evidence where appropriate.
- The rationale for carrying out this work and a justification of your proposed methodology.
- How you will undertake the work (materials and methods).
- How you will manage the work (role and responsibilities, project management tools etc.)

(This may be a repeat from Stage 1 but you may update or refine as necessary)

In designing this project, the BVI and UoP team have reviewed relevant Darwin Plus documentation. We started with a 2019 Darwin Plus proposal for a multiple-OT soil survey, including the BVI (DPR8S1/1078). That unsuccessful proposal had soil samples sent to the UK for analysis, minimising the potential for capacity building and missing an opportunity to establish a BVI soil analysis capability. In contrast, our proposal focuses on the BVI, responding to soil-associated needs, with a consortium of local stake-holders who will benefit. Significantly, our project includes the BVI's community college, which will host the proposed soil analysis laboratory, using equipment and technical training provided by the UoP team.

Following advice from a BVI partner, the National Parks Trust (NPT), we examined an ongoing DarwinPlus project: Identifying and conserving resilient habitats in the BVI (DPR7P\100036 RBG Kew). Many of the objectives of that project align with our proposed BVI multi-purpose soil survey. The envisaged BVI soils database and digital maps of terrain, geodiversity and soil types should assist the RBG Kew team with identifying critical and resilient habitats. Beyond the general BVI soil survey, based on bedrock type and terrain, we will also be sampling soil at locations, (i) recommended by our NPT partners, within National Parks and Tropical Important Plant Areas (TIPAs); (ii) where the RBG Kew team have installed data-loggers to measure humidity, temperature and/or soil temperature.

We will be using digital geology maps as the basis for our mapping of geodiversity and soil types (e.g. Skelsey, 2012; USGS 2019; and the current BVI Bedrock Hazard Risk Map - see uploaded maps), cross-referencing with the mapped soil types of the US Virgin Islands (USDA, 2000), following a Land Systems approach (Teeuw, 1991, 1994, 2002, 2005) updated to include geodiversity mapping (Argyriou et al. 2016) and DEM data. From the published BVI bedrock maps we can predict 10 main soil types on the main islands, each with sub-types based on their topographic position, drainage and weathering/erosion products. We will use a random stratified approach to sample those soil types.

Three of the UoP team (RT, FC, NA) have relevant experience in the Caribbean (Dominica: 2014, RGS fieldwork grant), surveying coastal geomorphology, biodiversity and hydro-geochemistry, establishing an environmental laboratory in the Cabrits Heritage & Ecology Centre. In the first year of the BVI Multi-purpose Soil Survey, we will establish a soil laboratory, hosted by a community college, during June 2022. The focus of year-1 will be training in soil survey methods, soil properties and laboratory analyses, with a reconnaissance survey of the main populated islands (June 2022); then a detailed survey and analysis of those islands (Jan 2023), including assessment of waste site / septic tank pollution and mitigation recommendations, with ensuing laboratory analysis of the collected soil samples, carried out by the newly-trained BVI technical staff during Jan/Feb 2023, resulting in a soil inventory and digital mapping of the soil types, by May 2023.

In year-2, the project the focus will be on the geodiversity and soil biodiversity of the BVI. We have a specialist in our team for the analysis of soil microbiota and soil-plant interactions. The sampling will focus on priority locations recommended by the BVI NPT, plus some sites targeted by the GIS-based geodiversity mapping. Our soil biota specialist (Dr Heather Rumble) will initially concentrate training on sample design and comparative methods to assess biodiversity. She will use some of the allocated time to orientate herself with the BVI's soil fauna & soil flora/seeds, followed by higher-resolution data collection. Soil biodiversity will be sampled during June 2023, with the soil laboratory analyses then carried out by newly-trained NPT staff during the 2023 rainy season, in the (by then) well-established soil lab.

The UoP team will build capacity via workshops with background lectures, leading to 'hands-on' training in soil survey and sampling, then laboratory processing and analysis on the collected soils, with concluding workshops on GIS-based soil

mapping and data interpretation for informing decision-makers. Training, aiming for 20 BVI trainees, will be during the 3 visits of the UoP team (June 2022, January 2023 and June 2023) and will follow UN FAO procedures, supported by FAO online materials. The sessions will be recorded, for use in future training and community college teaching.

The project will be managed by the PI (Teeuw), who will have weekly meetings with the BVI partner representatives, via Zoom, and quarterly meetings with the project Advisory Committee to review progress and resolve issues arising, as well as drafting half-yearly and annual project reports.

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

 [BVI digital maps for the geodiversity analysis and delimitation of soil types](#)

 09/01/2022

 22:57:47

 pdf 310.37 KB

 [Equipment costing BVI soil lab](#)

 09/01/2022

 22:42:01

 pdf 113.27 KB

 [References cited and UoP team publications list](#)

 09/01/2022

 22:33:08

 pdf 623.61 KB

Section 7 - Stakeholders and Beneficiaries

Q13. Project Stakeholders

Who are the stakeholders for this project and how have they been consulted (include local or host government support/engagement where relevant)? Briefly describe what support they will provide and how the project will engage with them.

Building on discussions between the PI and BVI organisations since December 2020, the project has seven BVI stakeholders, reflecting the need for a multi-purpose soil survey. Stakeholders will each be providing 2 staff for training in soil survey and analysis, which will be tailored to the needs of each organisation.

The lead stakeholder is the Department of Disaster Management (DDM), which has collaborated with UoP since 2011 via research projects supervised by Prof Teeuw. DDM regards a BVI soil inventory and GIS-based map as essential for geohazard management and climate change risk reduction. DDM will provide organisational and operational support, with a technician allocated to analysing soil samples.

The National Parks Trust (NPT), recognises the need for soil data when managing critical habitats such as TIPAs. NPT has 20 years experience with Darwin projects and highlighted ways in which soil data could support the ongoing DarwinPlus BVI project led by RBG Kew. NPT will provide operational support for accessing remote islands.

The Lavitty Stouff Community College will provide laboratory space for the soil analysis equipment and host the workshops. Training of trainers will be carrying out with college teachers, with Soil Science added to the curriculum – helping to raise public awareness about the importance of soil management.

The other BVI stakeholders mainly have an advisory role: the priority of the Agriculture Department is soil suitability for farming; the Ministry of Natural Resources, Environmental Health Division and Town & Country Planning Department are particularly concerned about waste management and pollution.

Q14. Institutional Capacity

Describe the Lead Partner's capacity (and that of partner organisations where relevant) to deliver the project.

The University of Portsmouth Higher Education Corporation (UoP) is an experienced research and training provider that is ranked in the top 2% of the world's universities. Over 60% of our research was rated world-leading and internationally

excellent by the UK Research Excellence Framework (REF2014) while our teaching was rated Gold by the UK Teaching Excellence Framework (TEF). With two Development Programmes, UoP provides training and support to research staff and graduate students, building their skills in the domains of: knowledge and intellectual abilities; personal effectiveness; research governance and organisation; public engagement; influence and impact. UoP holds both the European Commission Human Resources Excellence in Research Award, and the Athena Swan Bronze Award, confirming our determination to ensure an inclusive research culture valuing all staff, and our commitment to identifying and removing gender bias.

The project leader, Prof Richard Teeuw, has been collaborating the main BVI partner, the Department of Disaster Management, since 2011 and is familiar with the Territory's disaster risk reduction and climate change adaptation issues. Prof Teeuw studied tropical geomorphology for his PhD, which involved training in Soil Science at the Aberdeen University, with fieldwork sampling and analysing soil topo-sequences. He has led many multi-disciplinary projects involving fieldwork and geoinformatics: of particular relevance here is the NERC-funded survey they he led in 2018, examining the impacts of Hurricane Maria in Dominica.

Q15. Project beneficiaries

Who will your project benefit? You should consider the direct benefits as a result of your project as well as the broader indirect benefits which may come about as a result of your project achieving its Outputs and Outcome. The measurement of any benefits should be included in your project logframe.

The major direct beneficiaries will be Virgin Islands government departments that are partners in the project: Environmental Health, Agriculture, Town & Country Planning, Disaster Management, as well as the Ministry of Natural Resources and National Parks Trust.

Those 6 BVI stakeholder organisations – and the BVI inhabitants that they serve - will benefit from provision of soil maps and data. Those soil datasets will provide the BVI with previously unavailable information for environmental management: from land suitability for agriculture, mitigation of pollution, stabilisation of erosion or landslides, to biodiversity conservation and modelling impacts of climate change.

Those 6 BVI partner organisations, as well as our Lavity Stoutt Community College partner, will also directly benefit from Capacity building. We will be establishing a soil laboratory within the college, with training of at least 2 staff from each of the 7 BVI partner organisations. The Community College will be adding soil science to its teaching curriculum, so the school students of the BVI will be benefiting.

With regard to long-term broader indirect benefits, due to achieved Outputs and Outcomes, all seven of the project's BVI stakeholder organisations, and the people they serve, will remain as beneficiaries.

Section 8 - Gender and Change Expected

Q16. Gender (optional)

How is your project working to reduce inequality between persons of different gender? At the very least, you should be able to provide reassurance that your proposed work is not increasing inequality. Have you analysed the context in which you are working to see how gender and other aspects of social inclusion might interact with the work you are proposing?

The project is aiming for gender equality in its operational tasks. We will be following University of Portsmouth guidelines on workplace gender equality and the Athena Swan Equality Charter: <https://www.port.ac.uk/about-us/structure-and-governance/corporate-governance/equality-and-diversity/gender-equality>

Of our UK and BVI project team members, there is currently a ratio of 7 females to 10 males. In an effort to improve that ratio, we will be requesting that at least one of the two trainees provided by each BVI partner organisation be female.

Q17. Change expected

Detail the expected changed this work will deliver. You should identify what will change and who will benefit a) in short-term (i.e. during the life of the project) and b) in the long-term (after the project has ended). Please describe the

changes for the environment and, where relevant, for people in the OTs, and how they are linked.

Short-term changes will be: (i) Provision of soil data and maps: the BVI will have a set of digital maps showing the distribution of soil types and their properties. The soil survey will provide BVI decision-makers and policy-makers with previously unavailable data for many aspects of environmental management: from land suitability for agriculture, to mitigation of sewage pollution, to stabilisation of erosion or landslides, to soil biodiversity and modelling impacts of climate change.

(ii) Capacity building: we will establish a BVI soil laboratory in year-1 of the project. Training will be provided to 2 staff from our 6 BVI partner agencies: Environmental Health, Agriculture, Town & Country Planning, Disaster Management, Natural Resources and National Parks. Training will also be provided to 2 teachers at the Community College hosting the soil laboratory: significantly, they will be adding soil science to the college teaching curriculum – that guarantees the continued operation of the soil laboratory for many years beyond the end of this project.

So, the BVI will benefit from this project via the training of at least 12 government/NGO staff and 2 college teaching staff. The training in soil surveys, soil sampling and soil analysis will also be open to staff of BVI businesses and NGOs (e.g. the farming and civil engineering / construction sectors).

Longer-term, the beneficiaries will remain as all 7 of the BVI stakeholder organisations listed above. There is potential for the BVI Community College to start a spin-off business, offering soil analysis as a commercial enterprise. The envisaged market would be Caribbean OT's and SIDS, with profits contributing towards upgrading of equipment. However, that will probably not be until about 5 years time, when the soil laboratory is well established - competition from soil testing companies in Puerto Rico is currently too strong.

Q18. Pathway to change

Detail the expected changes this work will deliver. You should identify what will change and who will benefit a) in the short-term (i.e. during the life of the project) and b) in the long-term (after the project has ended). Please describe the changes for the environment and, where relevant, for people in the OTs, and how they are linked.

The proposed BVI Multi-Purpose Soil Survey project is relevant to many Darwin Round 10 priorities. Key Outputs of the proposal are:

- (i) filling an important information gap, by producing a publicly-accessible geoinformatic inventory of BVI soil types, with thematic soil maps for various user groups (ie, farming, construction, geohazard mitigation and waste disposal), guidelines on soil and environmental management, as well as briefing documents for policy makers and public press releases.
- (ii) capacity development: establishing a Soil Laboratory for the BVI, with an associated methodology for soil survey, sampling and digital mapping – supported by 'on the job' training for BVI technical staff and the community college teaching staff. The BVI's main community college is a project partner and has offered to provide a laboratory room for soil analysis equipment. We will equip that laboratory with soil analysis equipment and provide training.

Impacts include increased awareness about the types of BVI soils and ways of reducing risks of soil degradation or erosion by changes in land use management, as well as informing planning and policy with regard to possible impacts of climate change and increasing population pressures, guiding sustainable soil management, food security, water security and biodiversity conservation.

Q19. Exit strategy

State how the project will reach a stable and sustainable end point, and explain how the outcomes will be sustained, either through a continuation of activities, funding and support from other sources or because the activities will be mainstreamed in to "business as usual". Where individuals receive advanced training, for example, what will happen should that individual leave?

Central to the BVI having a long-term capability for soil survey and analysis, is: (i) the availability of soil technicians, which should be secure because the project will be training-up two staff from each of the 7 stakeholder organisations; (ii) commitment of Lavity Stoutt Community College to host and maintain the soil analysis equipment provided by this project.

That commitment from the College is strong because it will be adding soil science to its curriculum, making use of training materials provided by UoP staff. The soil laboratory will add a practical dimension to teaching of applied soil science. The College is also aiming to develop soil laboratory usage for summer school field-based research, with visiting students

paying a user-fee to use the lab. Beyond soil science per se, there is topical research potential in biodiversity studies and micro-plastic pollution (via mangrove soils). UoP will be advertising to its students these BVI field-study opportunities.

The College is considering further developing the lab's analytical capabilities, by offering soil analyses on a commercial basis. However, that will be in a few years, when the soil laboratory is well established - commercial competition from soil testing companies in Puerto Rico is currently too daunting.

Q20. Ethics

Outline your approach to meeting Darwin's key principles for ethics as outlined in the guidance note. Additionally, are there any human rights and/or international humanitarian law risks in relation to your project? If there are, have you carried out an assessment of the impact of those risks, and of measures that may be taken in order to mitigate them?

The Project Lead, Portsmouth University, has a comprehensive policy for research project ethics, integrity and governance (see: <https://www.port.ac.uk/research/research-culture/research-ethics>)

The project:

- includes participation and leadership from BVI society: it has 7 local stakeholder organisations as partners, ranging from government agencies to the National Parks Trust and a community college. All 7 stakeholders contribute to an Advisory Committee, ensuring that the project involves local community perspectives and knowledge.
- meets all legal and ethical obligations of the BVI and does not entail any human rights and/or international humanitarian law risks.
- upholds the credibility of research and evidence, as well as recognising the importance of traditional knowledge, alongside scientific approaches.
- respect the rights, privacy, and safety of people who are impacted by project activities, using Prior Informed Consent principles with communities.
- has procedures in place to protect the health and safety of all project staff, with risk assessments (supported by relevant risk reduction measures) carried out for both fieldwork and lab work.
- follows benefit-sharing best practice, aiming to reduce Data Poverty (Leidig & Teeuw, 2016) by producing Open Access datasets, digital maps and journal publications. However, where there are issues with datasets to which the BVI Government has limited licenced access (e.g. LiDAR elevation data), then only derived maps produced by the project (ie, not the raw data) will be made publicly available.

Section 9 - Budget, Risk Management & Funding

Q21. Budget

Please complete the appropriate Excel spreadsheet, which provides the Budget for this application. Some of the questions earlier and below refer to the information in this spreadsheet. Note that there are different budget templates for grant requests under £100,000 and over £100,000.

- [Budget form for projects under £100,000](#)
- [Budget form for projects over £100,000](#)

Please refer to the [Finance Guidance](#) for more information.

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

NB: Please state all costs by financial year (1 April to 31 March) and in GBP. Darwin Plus cannot agree any increase in grants once awarded.

 [Budget-over-£100K UoP BVI](#)

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Q22. Financial Risk Management

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

Financial risks will be mitigated via the project partners' fiscal control mechanisms, in conjunction with strictly implemented financial reporting standards implemented by the lead organisation, the University of Portsmouth. Given the reputations of the partner organisations and the relative simplicity of the budget for this 2-year project, we consider the risk of fraud or corruption to be low.

However, the BVI partner organisations have reviewed the US\$ exchange rate for the past two years: they have found that exchange rate changes since the Stage 1 application was drafted have caused increases in the BVI costs. For this Stage 2 submission the BVI DDM have re-quantified the costs using the current exchange rate, allowing for potential increases from exchange rate trends.

Q23. Funding

Q23a. Is this a new initiative or a development of existing work (funded through any source)?

New initiative

Please provide details:

This is a new initiative.

However, this project builds on long-standing links between the University of Portsmouth (UoP) and the BVI Department of Disaster Management (DDM). That collaboration has been established for approximately 10 years with volunteer students from UoP's MSc course in Crisis & Disaster Management (run by Prof Teeuw) carrying out 1-month research projects within the BVI DDM.

One of those MSc research projects (Leo Skelsey, 2015) carried out a preliminary survey of BVI geology, soils and landslide hazards. Following that 2015 research, the DDM has been liaising with Prof Teeuw to carry out a more extensive, multi-purpose soil survey of the BVI. At the 2019 annual conference of the Caribbean Disaster & Emergency Management Agency, representatives of the DDM met with Prof Teeuw and discussed the feasibility of a multi-purpose soil survey of the BVI. A reconnaissance visit to the BVI by Prof Teeuw was scheduled for June 2020, but was postponed because of the Covid Pandemic. That visit would have been funded from GCRF pump-priming funds allocated to UoP for a project examining ways of improving climate change resilience in Caribbean communities (that project ran from January 2020 to June 2021)

Q23b. Are you aware of any other individuals/organisations/projects carrying out or applying for funding for similar work?

Yes

If yes, please give details explaining similarities and differences, and explaining how your work will be additional and what attempts have been/will be made to co-operate with and learn lessons from such work for mutual benefits.

Partly, although not for a multi-purpose soil survey - there is an ongoing BVI-based project, led by RBG Kew and funded by Darwin Plus (DPR7\100036): "Identifying and conserving resilient habitats in the BVI". Soil identification forms a minor part of that project, so the BVI multi-purpose soil survey proposed here would be adding a useful dataset to that ongoing project. Having reviewed fieldwork reports of the resilient habitats project, we have identified at least a dozen BVI locations where RBG Kew staff have installed data-loggers (soil temperature and air humidity/temperature) where our proposed survey could collect soil samples for analysis.

Also, the BVI National Parks Trust (NPT), one of the partners in this BVI soil survey proposal, is Lead Applicant of a

BVI-based project seeking Darwin Plus funding. The focus of that proposal is biodiversity conservation and BVI's Tropical Important Plant Areas (TIPAs). Having discussed both project proposals with BVI NPT colleagues we are confident that the soil survey proposed here can add value to the proposed biodiversity conservation project: e.g. during the 3rd fieldwork campaign of the BVI soil survey we will be sampling locations of biodiversity conservation importance that the NPT have recommended as priority sites.

Section 10 - Finance

Q24. Financial Controls

Please demonstrate your capacity to manage the level of funds you are requesting. Who is responsible for managing the funds? What experience do they have? What arrangements are in place for auditing expenditure?

The University of Portsmouth (UoP) had a total income of [REDACTED] in the year ending March 2021; it has a fully-resourced Finance section for administering funds, with a specialist team for financial management of research grants. That team assists UoP grant-holders with monthly financial reviews and reporting to funders. Professor Teeuw has 30 years of field-based research project experience and will be responsible for the daily management of the project funding.

Regarding financial auditing: UoP undergoes an annual audit by an external accountancy company. An audit expenditure of [REDACTED] has been allocated in the project budget, for an independent audit at the end of the funding period (March 2024).

Q25. Balance of budget spend

Defra are keen to see as much Darwin Plus funding as possible directly benefiting OT communities and economies. While it is appreciated that this is not always possible every effort should be made for funds to remain in territory.

Explain the thinking behind your budget in terms of where Darwin Plus funds will be spent. What benefits will the Territory/ies see from your budget? What level of the award do you expect will be spent locally? Please explain the decisions behind any Darwin Plus funding that will not be spent locally and how those costs are important for the project.

The project budget involves three components that will directly benefit the BVI:

- (i) Purchase of equipment for a BVI Soil Laboratory, hosted within the Lavity Stoutt Community College. After consulting with BVI partners, there are 28 items of soil analysis equipment that are needed, costing [REDACTED]
- (ii) Costs of the UoP team for 3 visits to the BVI, carrying out the soil survey, soil analyses, GIS-based mapping and training, for the UoP team's BVI accommodation and subsistence, are: [REDACTED]
- (iii) Costs incurred by the BVI partners during the 3 UoP visits, primarily for travel between islands, also costs for training workshops and Department of Disaster Management staff time for soil analysis assistance and project admin, including Co-chairing of the project Advisory Committee: [REDACTED].

A total of [REDACTED] of the project costs ([REDACTED]) will thus be spent within the BVI, or delivered as equipment for the soil laboratory.

The remaining [REDACTED] of the budget will be spent on UoP staff costs for travel to/from the BVI, soil data analysis, report writing, 3 Open Access journal papers, UoP overheads and M&E costs.

Q26. Capital Items

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

Central to this project is establishing a BVI Soil Laboratory, permanently based within the Lavity Stoutt Community College. To equip that laboratory, 26 items of soil analysis equipment that are needed, costing a total of [REDACTED] - which is less than [REDACTED] of the total project costs.

The equipment budget is included in the attachments, with the [REDACTED] cost included in the DarwinPlus Budget under 'Other'.

Most of that soil analysis equipment will be purchased in the UK, apart from some items that it will be cheaper to purchase in the BVI, such as the oven, soil auger, spade, mattock, trowel, buckets/bowls etc. However, 5 items each cost more than [REDACTED]: the sieve shaker ([REDACTED]), set of 10 nested sieves ([REDACTED]), Dry Thermostat 200 ([REDACTED]), portable Spectrophotometer ([REDACTED]), Sension MM378 meter ([REDACTED]). Three quotes will be requested from suppliers, for each of those items, in order to make best-value purchases.

Q27. Value for Money

Please describe why you consider your application to be good value for money including justification of why the measures you will adopt will secure value for money.

The BVI multi-purpose soil survey project delivers value for money by providing a key dataset that is currently missing and which all of the project's government agency partners have highlighted as being essential for effective decision making. The BVI soil inventory, digital maps and associated reports are needed for more effective management of environmental resources (from agriculture to biodiversity conservation) and risks (from geohazard mitigation and waste disposal/pollution control, to the prediction of climate change impacts).

Further value for money is provided via the establishment of a soil analysis laboratory within the BVI's main higher education institution, the Lavitty Stoutt Community College. That provides many benefits: adding an educational resource and boosting the technical capability of the Territory; raising local public awareness about the value of soils for many aspects of the BVI economy; providing a sustainable analytical facility that is embedded in the local education system, yet has potential (in a few years time) for generating commercial soil testing revenues.

The budget has been developed via many months of consultation between the project stakeholders. Having BVI partners has enable the budget to be based on best-value local prices, e.g. for vehicle and vessel hire, or accommodation and subsistence. UoP and the BVI partners have contributed a significant amount of the project's overall costs as in-kind matched-funding (25%).

Q28. Outputs of the project and Open Access

All outputs from Darwin Plus projects should be made available on-line and free to users whenever possible. Please outline how you will achieve this and detail any specific costs you are seeking from Darwin Plus to fund this.

Project progress updates and reports will be communicated via social media (e.g. Facebook, Instagram, Twitter). Blogs about the project and its achievements will be published on the websites of the University of Portsmouth (UoP), the BVI Disaster Management and the National Parks Trust at the end of years 1 and 2. The freely-available ResearchGate website will be used to produce a dedicated project webpage, on which project reports and other outputs will be published (e.g. thematic maps, or feature identification guides of soil biodiversity analysis).

All of the project datasets, maps and reports will be described via embedded metadata, with copies provided to all partners. The digital thematic maps will be produced using Open Geospatial Consortium standards (<https://www.ogc.org/standards/wms>) and provided to the the Government of the Virgin Island's National Geographic Information System.

A final report will present the methodologies used in the project, the soil inventory results and guidelines for various applications involving soils (e.g. agriculture, biodiversity conservation, waste management and micro-plastic pollution monitoring, hazards with construction sites and land clearance, soil hazard zones associated with extreme weather events).

Three scientific articles will be drafted (on the GIS-based soil mapping methodology, BVI soil biodiversity, and applications for resource and risk management) for publication in Open Access peer-reviewed international journals. There is usually a fee for Open Access publication, it varies between journals (typically between [REDACTED] per article) We are therefore requesting [REDACTED] to cover the cost of 3 Open Access journal publications.

Section 11 - Safeguarding

Q29. Safeguarding

Projects funded through Darwin Plus must fully protect vulnerable people all of the time, wherever they work. In order to provide assurance of this, projects are required to have appropriate safeguarding policies in place. Please confirm the lead organisation has the following policies in place and that these are available on request:

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

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

Please outline how you will implement your policies in practice and ensure that downstream partners apply the same standards as the lead organisation.

None of our BVI partner organisations that are government agencies currently has a safeguarding policy. However, the Lavity Stoutt Community College, does have an extensive set of relevant policies, such as on ethics, health and safety or sexual harassment (see: <https://hlscc.org/policies/>), and the project staff will abide by those policies while working within that college, which will be hosting the soil laboratory and hosting the training workshops.

Outside of the Lavity Stoutt Community College, for all other activities within the BVI territory, all of the project members will be expected to adhere to the University of Portsmouth (UoP) safeguarding policy, following a briefing at the start of the project.

The UoP guidelines on health & safety, particularly fieldwork risk management are particularly important for the soil survey component of the project, which will involve boat travel between islands and fieldwork in often difficult terrain, under hot tropical conditions. UoP Fieldwork Risk Assessment forms (which include identifying the risks associated with each task, then mitigating and managing those risks) will be completed before the start of all the soil survey activities, as well as the laboratory soil analysis sessions and workshop training sessions.

Section 12 - Logical Framework

Q30. Logical Framework

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

- [Stage 2 Logframe Template](#)

Please complete your full logframe in the separate Word template and upload as a PDF using the file upload below – **please do not edit the template**

structure other than adding additional Outputs if needed as a logframe submitted in a different format may make your application ineligible. Copy your Impact, Outcome and Output statements and your activities below - these should be the same as in your uploaded logframe.

Please upload your logframe as a PDF document.

 BVI soil survey R10 DPlus St2 Logical Framework

 09/01/2022

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 pdf 81.71 KB

Impact:

BVI soil types and soil biodiversity surveyed and mapped, enabling improved waste management, conservation, food security and extreme weather coping capacity; with self-sufficiency in soil survey and analysis capabilities.

Outcome:

BVI soil maps and information on soil suitability for Farming, Waste Management and Construction, leads to increased risk awareness, and improved climate change preparedness, evidenced by better land management practices.

Project Outputs

Output 1:

Establish BVI Soil Laboratory (hosted by the Lavity Stouff Community College); carry out soil survey and produce a BVI Soil GIS, with guidelines for users.

Output 2:

Training provided to BVI Government staff and to the BVI's main higher education institution (Lavity Stouff Community College, which will host the laboratory and the workshop training).

Output 3:

Dissemination of Soil Survey findings: briefing documents, Soil GIS with analysis-ready maps, for environmental managers and policy-makers; public-access webpage; press releases; Open Access scientific publications.

Output 4:

Monitoring and Evaluation, with project reporting.

Output 5:

No Response

Do you require more Output fields?

It is advised to have less than 6 Outputs since this level of detail can be provided at the Activity level.

No

Activities

Each activity is numbered according to the Output that it will contribute towards, for example 1.1, 1.2 and 1.3 are contributing to Output 1.

- 1.1 Soil laboratory established. 1.2. Soil survey, sampling and soil lab analyses. 1.3 Soil inventory, Soil GIS database and maps. 1.4 Review of predictive accuracy for each soil type. 1.5 Thematic soil suitability maps and soil management guidelines.
- 2.1. Training in soil survey and soil analysis. 2.2 Training in GIS-based soil mapping. 2.3 Training on soil maps and briefing documents, for environmental managers and policy makers.
- 3.1 Report on BVI Soils, highlighting the value of soil data. 3.2. Briefing documents on soil applications and soil sensitivity. 3.3. Public-access version, BVI Soil GIS and documentation. 3.4. Press releases on project findings. 3.5 Open Access journal

articles on key project findings.

4.1. Monitoring and Evaluation plan produced. 4.2. Quarterly reports produced. 4.3. Advisory Committee meetings held, with minutes produced. 4.4. Final report produced.

Section 13 - Implementation Timetable

Q31. Provide a project implementation timetable that shows the key milestones in project activities

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

[Implementation Timetable Template](#)

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

 [BVI UoP R10-DPlus-Implementation-Timetable](#)

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Section 14 - Monitoring and Evaluation

Q32. Monitoring and evaluation (M&E)

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

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

The project is a partnership between the University of Portsmouth (UoP) and 7 BVI stakeholder organisations: Department of Disaster Management (DDM), National Parks Trust (NPT), Lavitty Stouitt Community College, Environmental Health Division, Town & Country Planning, Agriculture Department and the Ministry of Natural Resources.

The project leader has consulted with the BVI partner organisations regarding the format of the Monitoring and Evaluation (M&E). Each partner organisation will be a member of the project Advisory Committee, Co-chaired by Mr Jason Penn (DDM Director) and Dr Prem Wattage (independent consultant, lecturer at Sabaragamuwa University, Sri Lanka, and UoP Visiting Researcher). Dr Wattage led a Darwin-funded project during 2000-2002 (DR8\ 9-002): both he and Mr Penn have extensive experience of project management, monitoring and evaluation. Prof Simon Cragg (UoP School of Biosciences) is in the Advisory Committee, pro bono: he has extensive experience of managing field-based research projects in tropical coastal environments.

The Advisory Group will meet quarterly via Zoom, to review progress and ensure that reports for Darwin are prepared on time. The PI, Prof Teeuw, will provide the Advisory Committee with progress reports for consideration at each quarterly meeting. The progress reports will enable the Advisory Committee to make informed recommendations that guide the project to achieving its goals, maximising impacts and ensuring value for money. The proceedings of each Advisory Group meeting will be minuted by Melanie Daway (BVI DDM), to provide a means of verification for the M&E plan. The quarterly reviews will be used by the Advisory Committee and the Project Leader to evaluate progress against the logical framework and to identify any problems with meeting project indicators and targets. Any changes deemed necessary, due to limited progress or unanticipated events, will be implemented.

Grant agreements, confirming the roles and responsibilities of each partner in the delivery of the project, will be established and signed by UoP and each project partner at the start of the project. An end of project report will provide an evaluation of the project impact, highlighting its successes and reviewing any failures, providing recommendations for improvements and follow-on research. The final report will be provided to Darwin and disseminated via the project's ResearchGate webpage.

Some external validation of the quality of research undertaken by the project will be provided via publication of key findings in peer-reviewed international journals. The project team is expecting to publish three Open Access articles: (i) on the GIS-based soil survey mapping; (ii) about soil-informed environmental management; (iii) on aspects of the soil biodiversity. Manuscripts for topics (i) and (ii) will be drafted at the end of year-1, aiming for publication early in year-2. The manuscript for topic (iii) will be submitted to a journal during January 2024, aiming for publication by March 2024, but it should be noted that the peer review process might result in that 3rd article being published after the project end-date.

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

Section 15 - Lead Partner Track Record

Q33. Lead Partner track record

Has your organisation been awarded a Darwin Initiative award before (for the purposes of this question, being a partner does not count)?

Yes

If yes, please provide details of the most recent awards (up to 6 examples).

Reference No	Project Leader	Title
DR8\ 9-002	Dr Prem Wattage	Effective management for biodiversity conservation in coastal Wetlands, Sri Lanka
No Response	No Response	No Response
No Response	No Response	No Response
No Response	No Response	No Response
No Response	No Response	No Response
No Response	No Response	No Response

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

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

Yes

Section 16 - Certification

Certification

On behalf of the

trustees

of

University of Portsmouth

I apply for a grant of



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

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

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

Checked

Name	Mrs Melissa Johnson
Position in the organisation	Accountant, UNiversity of Portsmouth
Signature (please upload e-signature)	M Johnson UoP signature 10/01/2022 15:20:08 png 11.27 KB
Date	10 January 2022

Please upload the Lead Partner's Safeguarding Policy as a PDF.

[UoP safeguarding policy-020](#)
 09/01/2022
 22:05:10
 pdf 407.15 KB

Please attach the requested signed audited/independently examined accounts.

[UoP Financial Review 2021_A951642](#)
 09/01/2022
 22:05:28
 pdf 4.23 MB

[UoP Financial Review 2020_A902860](#)
 09/01/2022
 22:05:27
 pdf 1.13 MB

Section 17 - Submission Checklist

Checklist for submission

	Check
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 this proposed project.	Checked
I have provided a budget based on UK government financial years i.e. 1 April – 31 March and in GBP.	Checked
I have checked that the budget is complete, correctly adds up and I have included the correct final total at the start of the application.	Checked
The application has been signed by a suitably authorised individual (clear electronic or scanned signatures are acceptable).	Checked
I have attached my completed logframe and timeline as a PDF using the templates provided.	Checked
I have included a 1 page CV or job description for all the Project staff identified at Question 11, including the Project Leader, or provided an explanation of why not.	Checked
I have included a letter of support from the Lead Partner and main partner organisation(s) identified at Question 10, or an explanation of why not.	Checked
I have included a cover letter from the Lead Partner, outlining how any feedback at Stage 1 has been addressed where relevant.	Checked
I have included a signed copy of the last 2 years annual report and accounts for the Lead Partner, or provided an explanation if not.	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 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 partner, 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).