Darwin Plus Main: Annual Report

Darwin Plus Project Information

Project reference	DPLUS183
Project title	Biodiversity metrics in the British Virgin Islands
Territory(ies)	British Virgin Islands
Lead Partner	Royal Botanic Gardens, Kew (Kew)
Project partner(s)	National Parks Trust of the Virgin Islands (NPTVI)
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Project Leader name	Dr. Juan ████ (he/him)
Project website/blog/social media	https://www.kew.org/science/our-science/projects/biodiversity-metrics-british-virgin-islands
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1.   Project summary

The British Virgin Islands (BVI) belong to the Caribbean biodiversity hotspot, comprise ca. 650 angiosperms in an area of 153 km^2 and harbour 18 Tropical Important Plant Areas (TIPAs), key sites for the conservation of wild plants and threatened habitats, delimited by National Parks Trust of the Virgin Islands (NPTVI), the BVI Government and Kew in 2019. The main aim of the project is to identify plant species that contribute more to evolutionary diversity, heterogeneity and resilience of habitats using three biodiversity metrics: phylogenetic diversity, species richness and species threat assessments.

What environmental and/or climate change issue/s is the project designed to address? Ongoing threats to BVI biodiversity are urbanisation, feral ungulates, invasive species, illegal clearance, and climate change. For example, the BVI are experiencing more severe weather events, such as Irma in 2017, the first recorded Category 5 hurricane to strike the BVI, followed by Maria a few weeks later. The three biodiversity metrics that we will generate for the BVI angiosperms will constitute a baseline of scientific evidence to respond to threats in the territory and make informed decisions for biodiversity management.

Why are they relevant, and for whom? NPTVI is the statutory authority responsible for the conservation of terrestrial and marine habitats and the management of protected areas, including 21 National Parks. A broad inventory of species and habitats present in the BVI is essential to develop approaches to decrease biodiversity loss and climate change impacts. Conserving and restoring habitats by maintaining high biodiversity levels will enhance resilience to inevitable future threats and changes, especially in habitats identified as vulnerable to more intense weather events (DPLUS084) and other climate change related occurrences (DPLUS180). However, we lack knowledge required to identify key species that contribute more to the evolutionary diversity, heterogeneity and thus resilience of habitats, pivotal data for NPTVI to inform conservation action. Wider engagement will promote the value and cultivation of native plant species, which can contribute to habitats' resilience by increasing biodiversity, and community engagement activities (e.g., Arbour Day). These approaches have strong relevance to other Caribbean partners who could apply similar methodologies to their conservation action plans.

Briefly describe the location (with a map if possible) of the project. The BVI contain 61 islands and cays. Our project targets all native flowering plants in BVI. The BVI belongs to a biogeographic region named the Puerto Rican Bank, which includes BVI, the USVI and Puerto Rico.

Figure 1. Map of the British Virgin Islands, source: https://ian.macky.net/pat/map/vg/vg_blu.gif

2. Project stakeholders/partners

The main stakeholder and main partner in this project is the NPTVI. NPTVI is the statutory authority responsible for terrestrial and marine habitats in the BVI and the conservation actions and examples provided in the application represent the work NPTVI does daily. Kew and NPTVI have jointly delivered numerous projects over 25 years, and engagement between the two institutions is inherent to this project. Kew and NPTVI have jointly conducted fieldwork activities during Y1, and NPTVI was the beneficiary of most of the capacity building conducted during Y1 and for the remainder of the project. Both Kew and NPTVI have engaged with local government during the development of the proposal to better align the conservation plans and training that will be conducted at the local level. Local communities and school students will engage via Arbour Day and outreach activities. Kew and NPTVI extended an existing Memorandum of Collaboration (MoC) to continue our partnership during this project and to allow the transfer of collected plant materials to the UK. NPTVI has actively participated in all aspects of fieldwork and collection of plants and data, supporting these activities within National Parks across the BVI.

Regionally, we have engaged with the Herbarium of Mayaguez (MAPR, Biology Department, University of Puerto Rico). This is a recognised regional herbarium with collections from across the Puerto Rican Bank, which will play a key role to provide a regional dataset for all species which occur in BVI and Puerto Rico, increasing the robustness of the dataset used for the species distribution models, as well as species included in the reconstruction of the Tree of Life. MAPR will also participate in the regional workshop which will take place in Y3 of the project, together with colleagues from Caribbean UK Overseas Territories. They will learn about Kew and NPTVI's experiences in producing and applying biodiversity metrics for conservation actions. Jeanine Vélez-Gavilán, MAPR Head Curator and database manager, contributed to

the two fieldwork campaigns that took place in Y1 of this project. Jeanine prepared an identification guide for grasses and sedges, helped deliver training on collection and plant identification in the field, and actively contributed to the project by collecting and identifying plants and training NPTVI staff.

We engaged with two new collaborators since the start of the project: Omar Monsegur (US Fish and Wildlife Service - Caribbean Ecological Services) and Clare Weaver (Virgin Islands Rare Plants Initiative). Their collaboration has been essential to correctly identify BVI plants in the field, and they have contributed to our capacity building objectives by delivering training on plant identification during fieldwork activities. Clare Weaver participated in the two fieldwork campaigns, and Omar Monsegur in the fieldwork organized in March 2024.

3. Project progress

We compiled a draft list of native plant species for BVI at the start of the project, which is constantly being updated and modified, accommodating taxonomic changes, the discovery of new species during fieldwork or changes from native status to introduced for some species (results not shown in this report; this will be a final product for the project, Y3). This list of 650 species is the baseline for the comments towards progress for each activity and output below.

3.1 Progress in carrying out project 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 Collect tissue material from all specimens available at Kew and extract DNA. Quantify the DNA obtained to assess if it is suitable for sequencing methods (see activities in Output 2). This activity was planned for Q1-Q3 for Y1. In Q1, we collected 276 herbarium samples, and only nine of them were not suitable for further processing (low amount of tissue available on the specimen). We therefore added the species from the latter nine samples in our target list for fieldwork. In Q2, 251 samples were obtained from Kew's DNA and Tissue Bank and six from Kew's Living Collection. We successfully completed this activity by Q3 of Y1, totalling 533 samples (tissue bank 251, herbarium 276 and living collection 6). Details and the list of specimens collected during this activity can be found in Appendix 1.

1.2 Conduct fieldwork to collect plant material for ca. 150 native plant species not yet available at RBG Kew (Y1), and for any species not passing the DNA quality check in Activity 1.1 (Y2). Database all new herbarium and tissue samples. This activity was planned for Q2- Q4 for Y1 and Q1-Q2 for Y2. We produced a fieldwork target list including 358 species (Appendix 2) which included: i) species not available in Kew's collections (about 60 species, from activity 1.1); ii) samples not passing our quality filters in the molecular laboratory (see later in activity 1.3), iii) samples belonging to species present in BVI but not collected from BVI (from activity 1.1). We completed two fieldwork campaigns of three weeks duration each. In November/December 2023, we collected 295 herbarium specimens with three duplicates each, and 18 extra tissue samples just for DNA (Appendix 3). In March 2024, we collected 297 herbarium specimens with three duplicates each, and 19 plant tissue samples for DNA analysis; 97 species remain to be sampled (Appendix 4). In total, we have collected 653 herbarium collections plus 37 tissue samples for DNA, totalling 690 samples during Y1. In Y2, we will reschedule this activity from Q1-Q2 to Q3 to allow revision of the target list based on lab processing results and checking regional herbaria in Puerto Rico as an additional source of samples, before undertaking more fieldwork in November 2024.

1.3.1 Extract DNA from newly collected materials. Confirm appropriate amounts of DNA were extracted as expected from recently collected materials. N/A. Activity planned for Q2-Q3, Y2.

1.3.2 Database all DNAs and incorporate them in the DNA and Tissue Bank at RBG Kew. Activity planned for Q4, Y2. We have made progress on this activity by processing, preparing, and submitting all DNA samples from Activity 1.1 (Appendix 1) to Kew's DNA and Tissue Bank.

1.4 Conduct fieldwork and carry out inventory lists of species in areas with low number of presence data, including areas that will be targeted for ecological restoration plans.

Activity planned for Q1-Q4 Y1 and Q1-Q2 Y2. During Q2 Y1, presence data from DPLUS084 was processed and imported to Kew's UKOTs database for incorporation into this project. This includes 6,000 presence points for 450 species. During fieldwork, we gathered 571 presence points in November/December 2023 and 370 in March 2024, totalling 941 presence points. In total, 6,941 presence points were incorporated in Kew's UKOTs database to support 2.2 activities.

2.1.1 Process samples to generate genetic sequence data for all native plant species in BVI (ca. 650). Activity planned for Q1-Q4 Y2. We have successfully processed all 533 samples in the molecular laboratory and received their associated genetic sequence data.

2.1.2 Conduct bioinformatic analysis and reconstruct a phylogenetic tree including all native plant species in BVI. Share the data with our colleagues from the Tree of Life Explorer (https://treeoflife.kew.org/). Activity planned for Q3-Q4 Y2 and Q1-Q2 Y3. Bioinformatics training has been provided to Freya Cornwell-Davison (Research Assistant). We have completed the Tree of Life for half of the BVI flora using samples from Activity 1.1, which includes 455 samples (Appendix Tree of Life; Appendix 5). The difference in the number of samples from 2.1.1 and 2.1.2 is due to samples discarded due to low quality or amount of DNA sequences obtained. The species names of the discarded samples have been added to the fieldwork target list.

2.2.1 Run species distribution models for all native plant species in BVI. Activity planned for Q1-Q4 Y2. We successfully finished the selection process for a new Research Assistant position who will work on delivering this activity during Y2.

2.2.2 Generate a map layer with estimates of species richness using the output from 2.3.1. Activity planned for Q4 Y2 and Q1 Y3. No changes.

2.2.3 Conduct conservation assessments and write a full Red List for all native angiosperms in BVI. Activity planned for Q4 Y2 and Q1 Y3. However, we have started assessing BVI species. To date, 75 species have had full Red List assessments drafted for the project, the majority of which are Least Concern. Some of the BVI endemic and near endemic species have been assessed by MSc students. Approximately 30 species will be assessed by interns between July and September 2024 and additional species research is being undertaken by volunteers. Assessments are being carried out using a semi-automated method to increase efficiency and rate of output. In progress.

2.2.4 Integrate all data in the Biodiverse software to calculate phylogenetic diversity and expected loss of Phylogenetic Diversity across the territory. Activity planned for Q4 Y2 and Q1 Y3. No changes.

3.1 In-person training during Y1 fieldwork for tissue collection for DNA and herbarium. Activity planned for Q2 Y1 and Q4 Y1. This activity happened during Q3 Y1 instead of Q2 Y1 because our first fieldwork campaign happened in November 2023. Training in-situ delivered to all NPTVI staff while doing fieldwork by RBG Kew staff and by regional experts invited to fieldwork (Appendix 3 and 4). All nine members of NPTVI staff involved in this project received this training (six terrestrial wardens, one senior terrestrial warden, one Deputy Director NPTVI, one Director NPTVI), and gender balance represents their staff (four female, five male). They all contributed equally to all activities in fieldwork.

3.2 In-person workshop with BVI staff for understanding biodiversity metrics use and interpretation of results. Activity planned for Q3-Q4 Y3. No changes.

3.3 In-person and online follow-up sessions in Y3 to train NPTVI staff responsible of conservation management decisions (Deputy Director) on using biodiversity metrics. Activity planned for Q2-Q4 Y3. No changes.

3.4 Organize an online workshop inviting colleagues and stakeholders from neighbouring islands. Report preparation to assess the attendance by gender and participation in workshops. Activity planned for Q4 Y3. No changes.

4.1 GIS analysis to prepare maps with biodiversity metrics, and lists of species, split by island, Tropical Important Plant Area (TIPA) and protected area. Activity planned for Q1-Q4 Y3. No changes.

4.2 Presentation preparation by NPTVI Deputy Director for explaining to different government departments about using biodiversity metrics in development planning. Activity planned for Q3-Q4 Y3. No changes.

4.3.1 List inventories prepared for three sites withing National Parks targets. Activity planned for Q2-Q4 Y3. No changes.

4.3.2 Species richness and threatened species lists within these areas extracted from the main database. Activity planned for Q2-Q4 Y3. No changes.

4.3.3 Analysis of biodiversity metrics to produce a list of key species for ecological restoration for Gorda Peak National Park (NP), Great Tobago NP, and Sandy Cay NP; and others if identified by NPTVI. Activity planned for Q2-Q4 Y3. No changes.

4.4 Extract lists of species per island with those contributing more to biodiversity. Share these data with NPTVI for integration in the 2025/26 annual work plan for growing plants. Activity planned for Q2-Q4 Y3. No changes.

4.5.1 GIS analysis overlapping habitat resilience to climate change from DPLUS180 and to extreme weather events from DPLUS084 with the biodiversity metrics herein developed. Activity planned for Q4 Y3. No changes.

4.5.2 Produce a list of key species per habitat in the context of climate change and their contributions to biodiversity. Activity planned for Q4 Y3. No changes.

5.1.1 Preparation of report explaining step by step the practical for DNA extraction. Activity planned for Q2-Q4 Y3. No changes.

5.1.2 Demonstration with NPTVI staff and training session. Demonstration with school group at J.R. O'Neal Botanic Garden. Activity planned for Q2-Q4 Y3. No changes.

5.2 Script and story preparation for educational animated cartoon. Production of the cartoons. Activity planned for Q1-Q4 Y3. No changes.

3.2   Progress towards project Outputs

Please see below a description of the progress based on the indicators and means of verification defined for each output.

Output 1. Biobank for the BVI flora established: tissue and DNA of all native plant species from the BVI secured in accessioned collections.

1.1 New tissue samples (with verified herbarium vouchers) collected during fieldwork for the ca. 150 previously non-collected plant species in BVI by YR2 Q4, from a baseline of 75% available in Y1. [DPLUS-C09] *Means of verification: 1.1 Tissue material collected for at least 150 species and published in fieldwork reports. Data included in Y2 annual report and open access databases (dnabank.science.kew.org, brahmsonline.kew.org/ukot/).*

Our baseline is calculated from a list of native plants in BVI of 650 species, for which we defined 75% available at Kew collections (herbarium, tissue, or DNA). We estimated that 150 species remained unstudied or not collected before and were included in our target list for fieldwork (see Appendix 2), which also includes species for which the specimens available in Kew collections did not produce DNA sequence data passing our quality thresholds, and species for which specimens available were not collected in BVI. We have conducted two fieldwork campaigns (see reports, Appendix 3 and 4), in which we collected 653 herbarium collections plus 37 tissue samples for DNA, totalling 690 samples during Y1, published in the fieldwork reports and information shared with all partners.

The list of BVI native plants is in draft and under continual revision with i) new species records found during our fieldwork which increase the original list; ii) discarding species that are considered non-native to the territory; iii) taxonomic changes that could either merge or split taxa. We have collected 227 species from our target list, and this number will likely increase significantly after we verify identifications or identify specimens that have not yet been assigned a species name. We have therefore exceeded the number of species we aimed to collect. However, we still need to collect 97 species, of which 54 correspond with species documented

for BVI but no herbarium vouchers located to date. We aim to fill this gap during our fieldwork planned for Y2 and with specimens requested from regional herbaria in Puerto Rico.

1.2 DNA bank created for all plant native species (ca. 650) in the BVI by YR2 Q4, increasing the available DNAs ten times from a baseline in Y1 of 10% of species. [DPLUS-C09] *Means of verification: 1.2 Report with the results of DNA extractions in Y2 annual report. Accession numbers created in the DNA & Tissue Bank at Kew (dnabank.science.kew.org).*

We successfully extracted DNA for 533 samples from Kew collections (tissue bank 251, herbarium 276 and living collection 6; Appendix 1). This list includes 41 repetitions; therefore, we have generated a DNA bank for 492 species, 75% progress towards our target of 650 species. All these samples have been processed and submitted to the Kew DNA and Tissue Bank. The samples collected in fieldwork during Y1 will contribute to achieving this objective.

1.3 Databasing completed for all newly collected materials by YR3 Q4 to achieve a full representation of all ca. 650 native plans in BVI. [DPLUS-C09] *Means of verification: 1.3 Herbarium vouchers data recorded and available in database (http://brahmsonline.kew.org/ukot/). Data shared with local partners.*

For all 690 samples collected during fieldwork in Y1, we have incorporated all the data into the Kew UKOTs database which includes information such as species name, family, GPS location, habitat, plant description and threats. Progress of this indicator is linked to the progress towards collecting all species from BVI (see indicator 1.1).

1.4 Collect native plant species presence points to increase our current database by 30% by YR2 Q2, from a baseline of 10,000 points. [DPLUS-C09] *Means of verification: 1.4 UKOTs Species and Specimens Database (http://brahmsonline.kew.org/ukot/) updated with new presence points and reported in Y2 annual report.*

We have incorporated all presence data from DPLUS084 to Kew UKOTS database, including 6,000 presence points for 450 species. In fieldwork, we gathered 571 presence points in November/December 2023 and 370 in March 2024, totalling 941 presence points. In total, 6941 presence points were incorporated in Kew's UKOTs database, thus doubling our target of 3,000 presence points. Fieldwork in Y2 and new specimens obtained from other collections will keep contributing to this output.

Output 2. A complete BVI Plant Tree of Life and biodiversity metrics calculated.

2.1 Generate DNA sequence data and complete the Tree of Life for all native plant species in BVI (ca. 650) by YR2 Q4, from a baseline of 36 species. *Means of verification: 2.1 DNA sequence data publicly available in SRA (https://www.ncbi.nlm.nih.gov/sra), and number of sequences produced in Y3 annual report. Phylogenetic analysis completed and a fully resolved phylogenetic tree for all native plants in BVI available. Data shared with Kew Tree of Life Explorer (https://treeoflife.kew.org/).*

We processed all 533 species from Indicator 1.2, and generated sequence data for all of them using a genomic approach named target capture with Angiosperms353, which allows us to sequence up to 353 nuclear genes for each sample. We applied the following criteria for their incorporation in the Tree of Life and the target list for fieldwork: i) specimen collected in BVI, ii) DNA with good concentration, iii) recovered at least 250 nuclear genes.

We have generated a Tree of Life containing half of the species of BVI (455 samples, Appendix 5). We have successfully completed the sequencing for 402 species with specimens from BVI, and we have 50 additional species with good DNA concentration and gene recovery although the specimens were not collected in BVI. Currently, this dataset only contains samples obtained from Kew collections, thus constituting a significant progress towards this output not planned to start until Y2, and without yet incorporating the 690 samples collected in our fieldwork activities during Y1, which will be processed and sequenced in Y2, as originally planned.

2.2 Three biodiversity metrics calculated for the entire flora of the BVI: species richness, IUCN Red List assessments and phylogenetic diversity by YR3 Q2. [DPLUS-E03] *Means of verification: 2.2 GIS layers available for BVI National GIS containing biodiversity metrics and*

inputs to generate them. Red List assessments completed, ready to be reviewed and submitted to the IUCN Red List of Threatened Species.

Planned to start in Y2, we have data for all BVI endemic or near endemic species assessed during a previous project (BVI Tropical Important Plants Areas Project) and data on Least Concern species, some of them assessed by MSc students in Y1.

Output 3. Capacity built for integrating biodiversity metrics into conservation management, action and decision-making.

3.1 At least three NPTVI staff trained and actively collecting herbarium and tissue samples and associated data by YR1 Q4. [DPLUS-A01] *Means of verification: 3.1 List of specimens collected by NPTVI staff included in Y2 annual report. Gender balance measured per fieldwork activity.*

Fieldwork reports from November/December 2023 and March 2024 attached as Appendix 3 and 4. These include the list of specimens collected by NPTVI staff as a measure of their active engagement in collecting herbarium and tissue samples and associated data. From the 653 herbarium specimens collected during Y1, 308 (nearly 50%) have collector numbers from NPTVI staff (Figure 1). The number of NPTVI staff trained in November/December 2023 fieldwork was eight (three female, five male), and they all contributed to fieldwork in March 2024. In March 2024, a member of NPTVI staff who did not participate in the first fieldwork, received training (one female) and actively participated in fieldwork. All nine members of NPTVI staff participating in this project received this training (six terrestrial wardens, one senior terrestrial warden, one Deputy Director NPTVI, one Director NPTVI), and gender balance represents their staff (four female, five male). They all contributed equally to all activities in fieldwork.
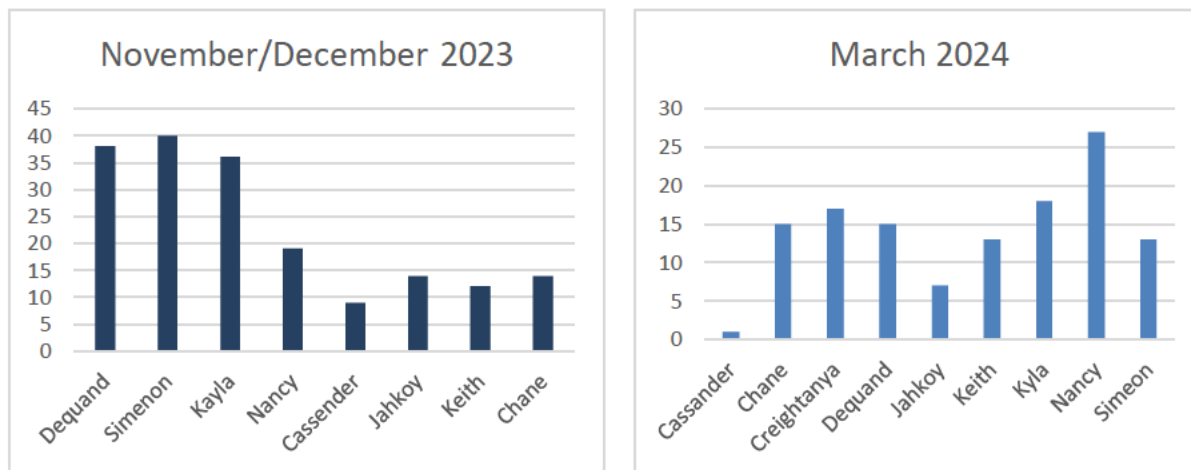

Figure 1. Number of collections and by NPTVI trained staff in fieldwork: November/December 2023 and March 2024.

All the following indicators correspond with outputs and activities planned to start in Y2 or Y3 and we do not have yet progress towards them: 3.2 At least three NPTVI staff trained and step by step manuals produced for interpreting biodiversity metrics data and designing ecological restoration plans by YR3 Q4. [DPLUS-A01]; 3.3 NPTVI Deputy Director trained to manage and update biodiversity metrics database and use it to design ecological restoration plans. [DPLUS-A01]: 3.4 End of project workshop to integrate biodiversity metrics in conservation shared with wider stakeholders, including partners from other Caribbean islands (including overseas territories) by YR3 Q4. [DPLUS-A01]. Output 4. Biodiversity metrics used to direct conservation action in the face of current and future threats. 4.1 Identify areas with the highest and lowest biodiversity levels and with the highest proportion of threatened plants, per island (Anegada, Tortola, Virgin Gorda), for the 18 Tropical Important Plant Areas (TIPAs) and protected areas to inform conservation management by local stakeholders by YR3 Q2. [DPLUS-B11] [DPLUS-C08]; 4.2 NPTVI use the biodiversity metrics generated to provide feedback on future land planning to at least four government departments (Town and Country Planning, Disaster Management and Agriculture and Fisheries Departments, and

Environmental Ministry) by YR3 Q2. [DPLUS-A04] [DPLUS-A07]; 4.3 At least three ecological restoration plans developed within National Parks using map layers containing biodiversity metrics to respond to biodiversity loss by YR3 Q4. [DPLUS-B01]; 4.4 The 2025/26 annual work plan at the J.R. O'Neal Botanic Garden includes propagation of five species per island for ecological restoration that contribute the most to biodiversity. [DPLUS-B02]; 4.5 Identification of key plant species to increase habitat resilience based on GIS analysis overlapping biodiversity metrics and ecosystem services data from DPLUS180 and forest resilience by DPLUS084 by YR3 Q4. [DPLUS-B02]. Output 5. Outreach activities to reinforce the importance of conserving native plant species. 5.1 Educational workshop for schools taken place at JR O'Neal Botanic Garden, on how to extract DNA from plants by YR3 Q4; 5.2 Produce educational animated tools and activities about the importance of safeguarding native biodiversity and growing native plants instead of exotic plant species by YR3 Q4.

3.3 Progress towards the project Outcome

Outcome: An integrated suite of biodiversity metrics is routinely implemented across the territory to mitigate against current and future threats.

0.1 Curated collections and presence data enhanced to represent 100% of all known native plant species in BVI and stored as duplicates in Puerto Rico (MAPR) and UK (Kew) herbaria by YR3 Q4, from a baseline of 75% available in Y1. *Means of verification: 0.1 Database comprising BVI's specimens, tissue, and DNA collections at RBG Kew and supplemented with collections at regional herbaria (MAPR) for all ca. 650 native plant species in BVI.*

Appendix 1 contains the list of the 533 samples obtained from Kew collections, corresponding to 492 species, 75% progress towards our target of 650 species. Fieldwork reports (Appendix 3 and 4) include the list of specimens collected during Y1, totalling 690 specimens (herbarium and DNA collections), data incorporated in Kew's UKOTs database and pendant to be updated after identifications are verified. Presence database generated including all data from our fieldwork. We still require collecting 97 species, from which 54 correspond with unstudied or not previously collected species (Appendix 2). We aim to fill in this gap during our fieldwork planned for Y2 and with collections requested from regional herbaria in Puerto Rico.

Indicators 0.2 and 0.3 will be informed by activities planned to start in Y2 and Y3 and we cannot yet discuss progress towards them, except for 0.2, because we have successfully reconstructed a Tree of Life of BVI flora for half of the species in Y1 (Appendix 5). "*0.2 Three internationally recognized biodiversity metrics completed for approximately 650 BVI native angiosperms and publicly available by YR3, from a baseline of 5% available in Y1; 0.3 BVI conservation stakeholders use the biodiversity metrics produced in this project to manage local biodiversity, to guide conservation, responding to local threats, and used to inform conservation action planning by Y3. [DPLUS-A03]*"

3.4 Monitoring of assumptions

Activities planned for Y1 are embedded in Outputs 1 and 3, and some project has been done in advance for activities in Output 2. The assumptions associated with each section remain true and there have not been changes in assumptions.

Outcome

Kew and BVI GIS specialists remain committed to the project, IT equipment, software and infrastructure are fit for purpose at Kew and in BVI. Staff turnover resulted in recruiting two new staff members (see section 9), not affecting the overall budget and change request approved. An additional change request was made and approved for laptop and software required for one of these two new positions, moving funds from "Others" to "Capital items" in the budget.

Project partners able to get into the field to collect specimens. Fieldwork dates were planned and jointly agreed in advance to ensure availability of NPTVI, Kew staff and regional partners

Project is not disrupted by major environmental events e.g., hurricanes, pandemics. This assumption remains true, and it has not affected our activities so far.

Online resources are maintained during and beyond the life of the project. All online resources included in our proposal remain available to this date.

Output 1

Kew staff are able to travel to the BVI to collect materials. Fieldwork dates are agreed and discussed in advance to ensure availability, we prepare materials and health and safety documentation with enough time to obtain approval for fieldwork. Kew staff has successfully travelled and collected plant samples in BVI in two occasions during Y1.

Export and import (e.g., CITES) permits issued for all missing species. CITES samples collected during fieldwork are stored locally by NPTVI until CITES import permits are approved, this will be done during Y2 of the project. The remaining plant samples collected have been successfully sent to Kew under the Memorandum of Collaboration between the two institutions.

Being able to locate all the unstudied species. We are using all available information (e.g., Kew UKOTs presence database, Flora of the West Indies, regional databased and GBIF) to locate species documented to occur BVI but not available at herbarium collections, and we received help from colleagues in Puerto Rico and the US Virgin Islands who are experts in the local flora. We have requested samples of unstudied species from other regional herbaria (e.g., Mayagüez herbarium in Puerto Rico). We are also evaluating names in the species list of BVI to verify their authenticity or if their inclusion is supported by a reliable source (e.g., herbarium collection). This assumption remains true.

Kew remain committed to maintain and enhance their specimen databases and making these publicly available. We have received 608 collections from our two fieldwork campaigns during Y1 and we are successfully incorporating them at Kew collections. In Y2, we will continue receiving and incorporating specimens in our collections, including CITES specimens that were collected in Y1 but are pendant to obtain the appropriate permits for importing to the UK or from fieldwork in Y2.

Kew's UKOTs team retains capacity to be able to maintain the UKOTs Species and Specimens Database. Kew's UKOTs capacity has changed in the last year (see Section 9). The database is currently maintained.

Output 2

DNA successfully extracted from problematic species (e.g., containing secondary metabolites, polysaccharides, etc.). We have successfully sequenced half of the BVI flora from materials available at Kew collections, and collected specimens of species that did not pass our criteria to be included in the BVI Tree of Life to get recent samples for molecular analyses.

The incorporation of new data and maintenance of the Kew Tree of Life Explorer continues at current levels. The current version of this portal is from April 2023, and it has been maintained during Y1 of our project. Next data release is planned for second half of 2025.

Sufficient presence points (10-15 per species) available from fieldwork activities and online resources (see methods) to adequately calculate species model distribution for each species. We have incorporated presence points collected during our fieldwork campaigns and from a previous project (DPLUS084) in our database, and we will be using the entire distribution range of the species (beyond BVI) to obtain all presence points available per species. This assumption remains true, and it will be assessed for rare species and scarcely studied species during the activities planned for Y2.

Output 3.

NPTVI retains trained staff. Staff turnover is an important risk in our project (see Section 9). All staff who received training during our fieldwork campaign in November and December 2023 contributed to our second fieldwork campaign in March 2024, with one new member of staff who did not receive training in November.

Appropriate designer is selected to produce cartoon. This assumption remains true for this activity planned for Y3 of the project.

Output 4.

Kew staff are able to travel to the BVI to collect materials and new data. This assumption remains true for this activity planned after Y1 of the project.

We have continued access to high-capacity computing at Kew and capacity to maintain databases. This assumption remains true for this activity planned after Y1 of the project.

Biodiverse software is maintained. This assumption remains true for this activity planned after Y1 of the project.

Evidence bases successfully established from outputs 1 and 2. This assumption remains true for this activity planned after Y1 of the project.

BVI National GIS maintained by BVI Government. This assumption remains true for this activity planned after Y1 of the project.

J. R. O'Neal Botanic Garden maintains capacity (facilities and staff) to grow native plants in the nursery. This assumption remains true for this activity planned after Y1 of the project.

Output 5.

Kew staff are able to travel to the BVI for training and educational activities. This assumption remains true for this activity planned after Y1 of the project.

4. Project support to environmental and/or climate outcomes in the UKOTs

In summary, the design of our project includes three phases: 1) gathering and collecting all native plants in BVI, 2) generating data and calculating the three biodiversity metrics proposed in the project, 3) applying and integrating the biodiversity metrics in conservation management in BVI. During the third phase, planned for Y3 of the project, we will expect significant impact to support environmental outcomes for BVI.

We are currently finishing phase 1, and about to complete the collection of all native plant species from BVI. We have collected new specimens with three duplicates, one of them will belong to the future BVI national herbarium, therefore constituting evidence and reference samples for future work in the territory at different levels, including research and conservation.

5. Gender Equality and Social Inclusion (GESI)

Please quantify the proportion of women on the Project Board[1].	Steering group is co-chaired by Colin ▆▆▆ (Kew) and Cassander ▆▆▆ (NPTVI), constituting 50% women. The members of the steering group are Nancy ▆▆▆ (NPTVI), Keith ▆▆▆ (NPTVI), Sara ▆▆▆ (Kew) & Juan ▆▆▆ (he/him, Kew). This constitutes 50% women and 50% members from each institution.
Please quantify the proportion of project partners that are led by women, or which have a senior leadership team consisting of at least 50% women[2].	BVI staffing is an exemplar of gender inclusivity, with two women leading the NPTVI.

GESI Scale	Description	Put X where you think your project is on the scale
Not yet	The GESI context may have been considered but the project isn't quite meeting the requirements of a	

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[1] A Project Board has overall authority for the project, is accountable for its success or failure, and supports the senior project manager to successfully deliver the project.

[2] Partners that have formal governance role in the project, and a formal relationship with the project that may involve staff costs and/or budget management responsibilities.

sensitive	'sensitive' approach	
Sensitive	The GESI context has been considered and project activities take this into account in their design and implementation. The project addresses basic needs and vulnerabilities of women and marginalised groups and the project will not contribute to or create further inequalities.	X
Empowering	The project has all the characteristics of a 'sensitive' approach whilst also increasing equal access to assets, resources and capabilities for women and marginalised groups	
Transformative	The project has all the characteristics of an 'empowering' approach whilst also addressing unequal power relationships and seeking institutional and societal change	

The overall project team is gender balanced, with equal responsibilities shared among members of different genders. BVI staffing is an exemplar of gender inclusivity, with two women leading the NPTVI. A mixed steering group will evaluate workshops and public engagement activities, to avoid gender stereotypes and promote gender equality and inclusivity. We will encourage the use of appropriate pronouns when interacting (emails, meetings) to promote gender inclusivity (if transgender and non-binary people engage in any of the planned activities). Workshops will target a gender balanced audience. We will measure attendance and participation based on age, culture and mobility and will, if needed, adjust our channels to approach the stakeholders. School engagement will aim to exclude any gender stereotype linked to any job within our project (i.e., by demonstrating that people from any gender are scientists, conservationists, etc.). This will be delivered by a gender-balanced team in the project. Kew has recently been awarded the Bronze level Athena Swan accreditation, in recognition of Kew's good practices towards the advancement of gender equality. Research Assistant recruitments were done following Kew's guidelines on gender balanced interview panels.

6. Monitoring and evaluation

Quarterly team meetings are organized to officially report progress of activities in the context of the indicators defined for each output. In the first meeting, roles and responsibilities were agreed for achieving each activity and output, and the people engaging in each of them (Appendix 6). Minutes of these meetings are prepared by the PI and co-PI of the project and circulated with the rest of the team. We also updated our Monitoring and Evaluation table with a summary of the progress for each activity for each quarter (see Appendix 7).

A steering group constituted by six members of the team is held quarterly, always following team meetings to discuss and assess the progress of activities and their contribution towards achieving outputs. The steering group is co-chaired by Colin Clubbe (Kew) and Cassander O'Neal (NPTVI). The members of the steering group are Nancy Woodfield-Pascoe (NPTVI), Keith Grant (NPTVI), Sara Barrios (Kew) & Juan Viruel (he/him, Kew). This constitutes 50% women and 50% members from each institution. Steering group meetings preceding reports (i.e., half year or end of year reports) aim to discuss individually the indicators and means of verification to define the numbers or values that demonstrate progress towards outputs, using Appendix 7 as a continuously updated document to monitor progress. Minutes of these meetings are prepared by the PI and co-PI of the project and circulated with the rest of the Steering Group.

7. Lessons learnt

- **What worked well, and what didn't work well this past year? If you had to do it again, what would you do differently?** The first phase of the project was well planned and organized, starting with processing samples of species from BVI already available at Kew collections, verifying if they were suitable for DNA work, and then conducting

fieldwork to complete the list of species from BVI. We would repeat this first stage following the same strategy if we had to start over. We have not encountered a major disruption or issue that should be reported in this section.

- **What recommendations would you make to others doing similar projects, for example tackling the same issues or working in the same geographical area? How are you going to build this learning into the project and future plans?** The composition of the team is essential to delivering similar projects, including local partnerships to identify plants and conduct fieldwork, and including experts to process samples in the laboratory to be able to obtain good DNA from a large variety of plants and types of materials. In future projects aiming to achieve similar objectives, we will make sure we have the right team in place.

- **Are you going to change your plan next year as a result of this learning? Do you plan to submit a Change Request?** We are not planning to submit a change request due to previous activities. We will soon submit a change request to ask for transferring staff costs for the new Research Assistant in Data and Spatial analysis who was budgeted at 100% time during Y2 of the project. The starting date for the newly appointed Research Assistant will be mid-June 2024, and thus we will request to transfer to next financial year the amount that was not used from 1st April 2024 to the Research Assistant's starting date to offer a one-year contract.

8. Actions taken in response to previous reviews (if applicable)

In our HYR1 report submitted in October 2023, we attached the version of the log frame modified following the recommendations received by reviewers at the start of the project (highlighted with track changes) and to incorporate the Standard Indicators.

9. Risk Management

Staff turnover was highlighted in our proposal as a potential risk. At the start of the project, Thomas Heller was going to be hired as project officer, and was due to conduct the lab work and participate with collating data for Red Listing, being funded at 80% of this time from the project. Thomas Heller received a promotion at Kew as a Research Leader, and we required new staff for the planned activities. We submitted a change request, LTS1167, to formalise a change in the operational team at Kew, with no impact on deliverables to the project. After receiving approval for this change request, we recruited Freya Cornwell-Davison as a research assistant at 50% to help with the molecular laboratory analysis, and Amy Barker at 30% as Red List assessment specialist, who has increased her contract hours at RBG Kew. The incorporation of two Research Assistants, Freya Cornwell-Davison and Amy Barker, in our team was positive and we do not expect any impacts on delivering planned activities due to these staff changes. An additional change request was requested and approved for laptop and software required by one of these two new Research Assistant positions (i.e., Freya Cornwell-Davison), to allow transferring £1,600 from section "Others" to "Capital Items" in the budget.

Colin Clubbe (Senior Research Leader of UKOTs team at Kew) retired last year, and this position will not be replaced, this has long term implications in the capacity of the Kew team, although we do not expect major implications in this project because Colin agreed to stay as collaborator, part of the steering group and helping with fieldwork activities.

As minor risk, we included "During the time of the project, we are not able to obtain plant samples". In August 2023, the Memorandum of Collaboration between RBG Kew and NPTVI was renewed until 31/08/28, which allows transferring newly collected specimens from BVI to RBG Kew.

10. Sustainability and legacy

During the first year, all NPTVI staff involved in the project received training on plant collecting and identification, which was well received by NPTVI. This is demonstrated by having actively participated in collecting all specimens during fieldwork (see section 3, part 3.1). Attention was received from BVI Governor John Rankin CMG who visited us at J.R. O'Neal Botanical Gardens (Tortola) during our fieldwork visit to BVI in November/December 2023 (see section

11). The data and applicability of the biodiversity metrics from this project will be usable by other regional stakeholders, as BVI belongs to the biogeographic region Puerto Rican Bank. We established collaboration with Jeanine Vélez-Gavilán (curator of MAPR, Puerto Rico), and she actively contributed to the two fieldwork campaigns. Two new collaborations were established demonstrating the interest from regional stakeholders on this project (see sections 2 and 3): Omar Monsegur (US Fish and Wildlife Service - Caribbean Ecological Services) and Clare Weaver (Virgin Islands Rare Plants Initiative).

Nancy Woodfield-Pascoe and Colin Clubbe contributed with an oral presentation at the 2024 Botanical Bridges Congress (Colombia, February 12-16, 2024), both highlighting the importance of biodiversity conservation in BVI, the focus of Nancy's presentation was the DPLUS183 project. The slides used are in Appendix 8 and 9, and links to the presentations are:

- https://www.youtube.com/watch?v=CRY8-N4I1bA&list=PLQhG0mxT1hvH_ghu-ypicnpRsgZJSMNfa&index=2
- https://www.youtube.com/watch?v=RHkYEv4cYN4&list=PLQhG0mxT1hvH_ghu-ypicnpRsgZJSMNfa&index=14

An assessment of the interest of the outcomes will be more effective at the end of this project because it mostly relies on the application of the biodiversity metrics we will calculate on biodiversity management. NPTVI staff will incorporate the skills gained during this project into their programme of work pattern, i.e., extracting biodiversity metrics and using them to directly guide biodiversity conservation in the BVI and protected areas management, or for activities at JR O'Neal Botanical Gardens. Nancy Woodfield-Pascoe will receive training and oversee the use of the project generated data, as part of her role as Deputy Director for Science, Research and Environmental Policy at NPTVI, as well as a member of the Town and Country Planning Department technical review committee for development planning applications at the BVI Government. NPTVI will be trained to use and maintain the biodiversity metrics database. Equally, the knowledge generated during this project will remain in the form of written guidelines for using datasets and biodiversity metrics for on the ground conservation management of biodiversity. This manual will include step-by-step instructions to incorporate newly generated data that could be produced in the future (e.g., new species discovered, new localities discovered for species), thus allowing an update of the biodiversity metrics and the continual benefits of their use. This analysis will not require further funding, furthermore, the recommendations produced from biodiversity metrics will direct and guide future funding applications and on the ground conservation management. Our approach can be scaled up across other Caribbean islands, benefitting conservation management of neighbouring islands and for better understanding how BVI plants fit into the regional context. In this way, this innovative project will establish a new 'business as usual' for conservation management in the BVI and better prospects for its biodiversity and associate ecosystem services. The animated educational cartoon and the new DNA extraction activity at JR O'Neal Botanical Gardens constitute permanent resources for engagement with school children and outreach interest in protecting BVI's floral diversity.

11.   Darwin Plus identity

- **What effort has the project made to publicise Darwin Plus, e.g. where did the project use the Darwin Plus logo and promote Darwin Plus funding opportunities or projects?** Our social media included links or tagged BCF and our DPLUS183 project (@KewUKOTs in Twitter/X). The logo is included in presentations in conferences and on the website of the project ("Funded by" section): https://www.kew.org/science/our-science/projects/biodiversity-metrics-british-virgin-islands

- **How has the UK Government's contribution to your project's work been recognised?** NPTVI directly engages with local authorities and update of the progress of the project and the importance of the outputs for biodiversity management in the BVI. An example of the engagement and interest from local government was the visit of the BVI Governor John Rankin CMG to the J.R. O'Neal Botanical Gardens (Tortola) during our fieldwork visit to BVI in

November/December 2023. This gave us the opportunity to talk about the project and its main objectives. Governor John Rankin CMG did his first herbarium collection after a training session delivered by NPTVI staff.

- **Was the Darwin Plus funding recognised as a distinct project with a clear identity or did it form part of a larger programme?** Darwin Plus funding has always been highlighted, recognised, and promoted by Kew and NPTVI staff involved in this project, and for having funded another Darwin Plus project linked with our current programme (e.g., DPLUS030, DPLUS84).

- **To what extent is there understanding of Darwin Plus within the territory(ies) and who is likely to be familiar with Darwin Plus?** NPTVI's public engagement programme has continuously promoted Darwin Plus funds and the importance of the research and conservation programmes that are delivered for BVI, for example, through their website (Project Highlights | National Parks Trust (bvinpt.org)) and Facebook: https://www.facebook.com/NPTVI/. NPTVI usually engage will local press to do public engagement of Darwin Initiative projects, including DPLUS183, e.g., https://www.bvibeacon.com/herbarium-planned-after-3-year-study/ and https://www.bvibeacon.com/reporters-notebook-march-21-2024/.

- **If you have a X (Twitter)/Instagram/Flickr/Blog/YouTube etc. account is this effective and have you linked back to the Biodiversity Challenge Funds / Darwin Plus and its social media channels?**

  https://twitter.com/kewukots, https://www.facebook.com/NPTVI/

  @KewUKOTs Twitter/X account has been used to disseminate results and progress in several Darwin Initiative funded projects in UK overseas territories, always tagging @BCF twitter account. The Facebook profile of NPTVI is frequently updated with local news about biodiversity, and this social network is widely used in BVI. Some examples are:

  - https://twitter.com/KewUKOTs/status/1776150506177528223
  - https://twitter.com/KewUKOTs/status/1772911396260356441
  - https://twitter.com/juanviruel/status/1768064657330262035
  - https://twitter.com/juanviruel/status/1765869004038545490
  - https://www.facebook.com/NPTVI/posts/pfbid0UWFgX4LwT6DgCaSqXxn9SSpGqJ6YvjcvTaZDSvg7fS2MKiyjn1htzkfSi6j9UPx7l
  - https://www.facebook.com/NPTVI/posts/pfbid02VFwGjfhXXVVMN9AAeqFxJEH3TdP3CoduNjbPv6o8wG9KGxCM1SVGUoH8qfUR7UCEl
  - https://www.facebook.com/NPTVI/posts/pfbid0a2TVU3b3b92nmaZ16CZGW6k4DaftDn4cjvKVMhNSpGcPisVp1Q2D8SYK5NVZ11nzl
  - https://www.facebook.com/NPTVI/posts/pfbid02XDWrHgGEsRFXHGnWFjyTgDmddyRjEJv5mctDAvZMtPaNoZtUnMmX2WddyNyZgpZMl

12. Safeguarding

Has your Safeguarding Policy been updated in the past 12 months?	Yes
Have any concerns been reported in the past 12 months	No
Does your project have a Safeguarding focal point?	No
Has the focal point attended any formal training in the last 12 months?	N/A
What proportion (and number) of project staff have received formal training on Safeguarding?	Past: 100% All RBG Kew staff have mandatory safeguarding training (7)
Has there been any lessons learnt or challenges on Safeguarding in the past 12 months? No.	
Does the project have any developments or activities planned around Safeguarding in the coming 12 months? No.	
Please describe any community sensitisation that has taken place over the past 12 months; include topics covered and number of participants. N/A	

Have there been any concerns around Health, Safety and Security of your project over the past year? If yes, please outline how this was resolved.
No

13. Project expenditure

Table 1: Project expenditure <u>during the reporting period</u> (1 April 2023 – 31 March 2024)

Project spend (indicative) in this financial year	2023/24 D+ Grant (£)	2024/25 Total actual D+ Costs (£)	Variance %	Comments (please explain significant variances)
Staff costs	■			N/A
Consultancy costs	■			N/A
Overhead Costs	■			N/A
Travel and subsistence	■			This large section of the budget covered all costs for two fieldwork campaigns of three weeks each. Underspend variance is mostly explained due to savings in accommodation during the second fieldwork because we found cheap apartment for all Kew staff, and living costs were less expensive during this fieldwork. The underspend variance is slightly higher than the threshold value o 10%, and we think the budget estimated originally was well designed for the complexities of this type of activity.
Operating Costs	■			N/A
Capital items	■			We received approval for a change request to transfer £1600 from "Others" to "Capital items". Irrecoverable VAT (Dell Latitude 5440 XCTO Base; Dell Dock WD19S, 180W + Adobe Software) for a value of ■ appeared in the accounts at the end of the financial year. This is balanced by the underspend in "Others", see below.
Others (Please specify)	■			We purchased all consumables and othe materials needed for fieldwork, including laptop accessories (bag, headset, keyboard & mouse) Field Boots, Clothing & Repellent, Herbarium Books, Adagio Teas Paper Filters Empty Tea Bags, Field Bag and Hydration Bladders, Olympus Field Camera plus accessories Professional plant presses & related accessories, Misc Field Consumables (heaters, walkie talkies, phone covers, voltage converters & hand lenses). After seeing the overspend in "Capital Items" due to irrecuperable VAT, we balanced with an underspend in this section.
TOTAL	£132,883.00	£129,136.01		

Table 2: Project mobilised or matched funding during the reporting period (1 April 2023 – 31 March 2024)

	Secured to date	Expected by end of project	Sources
Matched funding leveraged by the partners to deliver the project (£)	███████	███████	In-kind staff costs and the value of a boat from National Parks Trust of the Virgin Islands, NPTVI.
Total additional finance mobilised for new activities occurring outside of the project, building on evidence, best practices and the project (£)	███████	███████	In-kind staff and overhead costs from Royal Botanic Gardens, Kew.

14.   Other comments on progress not covered elsewhere

N/A

15.   OPTIONAL: Outstanding achievements or progress of your project so far (300-400 words maximum). This section may be used for publicity purposes.

I agree for the Biodiversity Challenge Funds to edit and use the following for various promotional purposes (please leave this line in to indicate your agreement to use any material you provide here).

Understanding and characterizing biodiversity is essential knowledge for efficiently protecting nature. For the first time, we are completing the collection of the entire flora for all native species in the British Virgin Islands (BVI). However, a list of species for a territory is challenging to establish due to taxonomical changes, defining the native or non-native status of species, or by finding new records of species during fieldwork. In our project, we have studied all specimens at Royal Botanic Gardens, Kew collections, including historical herbarium materials, and we have been able to reconstruct the Tree of Life for half of the flora with these samples. We newly collected 690 samples (herbarium specimens and DNA) during six weeks of intensive and collaborative fieldwork in BVI, bringing expertise from colleagues in regional islands (Puerto Rico, US Virgin Islands) to help identifying the unique flora of BVI. Through training and capacity building, BVI staff from the National Parks of the Virgin Islands carefully prepared and dried herbarium specimens with associated duplicates and collected leaf tissue in silica gel for future DNA analysis for all collected samples; and associated data which includes GPS location, plant identification, habitat and plant description, threats, and high-quality images. We still need to collect 97 species to complete the flora of BVI, which will enable us to calculate biodiversity metrics for all species occurring in the territory to guide future conservation action and management by local stakeholders.

File Type	File Name or File Location	Caption including description, country and credit	Social media accounts and websites to be tagged (leave blank if none)	Consent of subjects received (delete as necessary)
Images	███████████ ██████	Images taken during fieldwork activities for the project DPLUS183. BVI.	https://twitter.com/kewukots https://www.facebook.com/NPTVI/ https://www.kew.org/science/our-science/projects/biodiversity-metrics-british-virgin-islands https://www.bvinpt.org/blog	Yes

Annex 1: Report of progress and achievements against logframe for Financial Year 2023-2024

Project summary	Progress and Achievements April 2023 - March 2024	Actions required/planned for next period
Impact Plants and habitats of the BVI are better understood and conserved by using science-based management to increase their resilience to environmental change.	Progress towards a better understanding of BVI flora demonstrated by newly collected materials, including new records for BVI, and half of the Tree of Life of BVI flora reconstructed. NPTVI staff actively collecting local native flora and associated data, which will constitute the baseline for a future herbarium for the BVI.	■■■■■■■■■■
Outcome An integrated suite of biodiversity metrics is routinely implemented across the territory to mitigate against current and future threats.		
0.1 Curated collections and presence data enhanced to represent 100% of all known native plant species in BVI and stored as duplicates in Puerto Rico (MAPR) and UK (Kew) herbaria by YR3 Q4, from a baseline of 75% available in Y1.	533 samples obtained from Kew collections, corresponding with 492 species, 75% progress towards our target of 650 species (Appendix 1). Fieldwork reports (Appendix 3 and 4) include the list of specimens collected during Y1, totalling 690 specimens, data incorporated in Kew's UKOTs database and pendant to be updated after identifications are verified. We still require collecting 97 species, from which 54 correspond with unstudied or not previously collected species (Appendix 2). Presence database generated including all data from our fieldwork.	To complete the collection of all native plant species in BVI, and to process all newly collected samples in the molecular laboratory. We aim to fill in this gap during our fieldwork planned for Y2 and with materials requested to regional herbaria in Puerto Rico.
0.2 Three internationally recognized biodiversity metrics completed for approximately 650 BVI native angiosperms and publicly available by YR3, from a baseline of 5% available in Y1.		We will calculate the three biodiversity metrics for all native plant species during Y2 of the project.
0.3 BVI conservation stakeholders use the biodiversity metrics produced in this project to manage local biodiversity, to guide conservation, responding to local threats, and used to inform conservation action planning by Y3. [DPLUS-A03]		
Output 1 Biobank for the BVI flora established: tissue and DNA of all native plant species from the BVI secured in accessioned collections.		
1.1 New tissue samples (with verified herbarium vouchers) collected during fieldwork for the ca. 150 previously non-collected plant species in BVI by YR2 Q4, from a baseline of 75% available in Y1. [DPLUS-C09]	Y1Q1: Herbarium: 276 samples collected from the Herbarium, plus 9 non suitable for DNA sampling. 251 samples will be requested to the DNA and Tissue Bank. Y1Q2: DNA tissue samples collected. All DNA extracted, will be	We have collected materials for the number of species planned in the project. However, we will expand this during Y2: Collect the remaining 97 samples: i) request materials from

Project summary	Progress and Achievements April 2023 - March 2024	Actions required/planned for next period
	sent for sequencing (450 sp). 251 samples obtained from the DNA and Tissue Bank. Six samples from Kew's Living Collection. Activity 1.1. Completed	MAPR herbarium in Puerto Rico, ii) conduct fieldwork in November 2024.
1.2 DNA bank created for all plant native species (ca. 650) in the BVI by YR2 Q4, increasing the available DNAs ten times from a baseline in Y1 of 10% of species. [DPLUS-C09]	Y1Q1: Herbarium: 276 samples collected from the Herbarium, plus 9 non suitable for sampling. 251 samples will be requested to the DNA and Tissue Bank. Y1Q2: Field work planning started; dates and logistics to be arranged. Y1Q3: In December, we collected 295 herbarium specimens with 3 duplicates each, extra 18 tissue samples just for DNA, and. This would represent 30% of the target list. Y1Q4: Second fieldwork took place 4-24 March 2024, we collected 297 herbarium specimens with three duplicates each, and 19 plant tissue samples for DNA analysis. 97 species remain to be sampled.	Extract DNA for all newly collected materials from 1.1
1.3 Databasing completed for all newly collected materials by YR3 Q4 to achieve a full representation of all ca. 650 native plans in BVI. [DPLUS-C09]	Activities not planned in YR1 Y1Q4: DNAs from Activity 1.1 processed and submitted to Kew DNA & Tissue bank.	Process and submit newly extracted DNAs to the DNA and Tissue Bank.
1.4 Collect native plant species presence points to increase our current database by 30% by YR2 Q2, from a baseline of 10,000 points. [DPLUS-C09]	Y1Q2: Presence data for DPLUS084 being processed imported to UKOTS DB for incorporation into this project (6,000 presence points for 450 species). Y1Q3: 571 presence points data (276 observations and data from specimens collected). Y1Q4: 370 observations from March 2024 fieldwork	Incorporate new presence points if new samples are collected from 1.1
Output 2. A complete BVI Plant Tree of Life and biodiversity metrics calculated.		
2.1 Generate DNA sequence data and complete the Tree of Life for all native plant species in BVI (ca. 650) by YR2 Q4, from a baseline of 36 species.	Activities not planned in YR1 Y1Q4: All samples from Activity 1.1 processed and sequence data received. Tree of life reconstructed for half of BVI flora, totalling 455 samples.	Repeat the bioinformatic analysis after receiving new sequence data during Y2.

Project summary	Progress and Achievements April 2023 - March 2024	Actions required/planned for next period
2.2 Three biodiversity metrics calculated for the entire flora of the BVI: species richness, IUCN Red List assessments and phylogenetic diversity by YR3 Q2. [DPLUS-E03]	Activities not planned in YR1. Y1Q4: Bioinformatics training provided to Freya Cornwell-Davison (Research Assistant). Tree of Life completed for half of the BVI flora. Research Assistant position: selection process in progress. Some of the BVI endemic or near endemic species assessed by MSc students; most of them were LC, one or two could be threatened. In progress.	Calculate the three biodiversity metrics for all the native plant species in BVI.
Output 3 Capacity built for integrating biodiversity metrics into conservation management, action, and decision-making.		
3.1 At least three NPTVI staff trained and actively collecting herbarium and tissue samples and associated data by YR1 Q4. [DPLUS-A01]	Y1Q3: Training in-situ delivered to all NPTVI staff while doing fieldwork by RBG Kew staff and by regional experts invited to fieldwork (3 female, 5 male). Y1Q4: Training in-situ delivered to a new NPTVI staff who did not participate in previous fieldwork (1 female). Previously trained NPTVI staff actively participated in fieldwork (3 female, 5 male).	N/A
3.2 At least three NPTVI staff trained and step by step manuals produced for interpreting biodiversity metrics data and designing ecological restoration plans by YR3 Q4. [DPLUS-A01]	N/A – Activities not planned in YR1	N/A
3.3 NPTVI Deputy Director trained to manage and update biodiversity metrics database and use it to design ecological restoration plans. [DPLUS-A01]	N/A – Activities not planned in YR1	N/A
3.4 End of project workshop to integrate biodiversity metrics in conservation shared with wider stakeholders, including partners from other Caribbean islands (including overseas territories) by YR3 Q4. [DPLUS-A01]	N/A – Activities not planned in YR1	N/A
Output 4. Biodiversity metrics used to direct conservation action in the face of current and future threats.		
4.1 Identify areas with the highest and lowest biodiversity levels and with the highest proportion of threatened plants, per island (Anegada, Tortola, Virgin Gorda), for the 18 Tropical Important Plant Areas (TIPAs) and protected areas	N/A – Activities not planned in YR1	N/A

Project summary	Progress and Achievements April 2023 - March 2024	Actions required/planned for next period
to inform conservation management by local stakeholders by YR3 Q2. [DPLUS-B11] [DPLUS-C08]		
4.2 NPTVI use the biodiversity metrics generated to provide feedback on future land planning to at least four government departments (Town and Country Planning, Disaster Management and Agriculture and Fisheries Departments, and Environmental Ministry) by YR3 Q2. [DPLUS-A04] [DPLUS-A07]	N/A – Activities not planned in YR1	N/A
4.3 At least three ecological restoration plans developed within National Parks using map layers containing biodiversity metrics to respond to biodiversity loss by YR3 Q4. [DPLUS-B01]	N/A – Activities not planned in YR1	N/A
4.4 The 2025/26 annual work plan at the J.R. O'Neal Botanic Garden includes propagation of five species per island for ecological restoration that contribute the most to biodiversity. [DPLUS-B02]	N/A – Activities not planned in YR1	
4.5 Identification of key plant species to increase habitat resilience based on GIS analysis overlapping biodiversity metrics and ecosystem services data from DPLUS180 and forest resilience by DPLUS084 by YR3 Q4. [DPLUS-B02]	N/A – Activities not planned in YR1	N/A
Output 5. Outreach activities to reinforce the importance of conserving native plant species.		
5.1 Educational workshop for schools taken place at JRO'Neal Botanic Garden, on how to extract DNA from plants by YR3 Q4.	N/A – Activities not planned in YR1	N/A
5.2 Produce educational animated tools and activities about the importance of safeguarding native biodiversity and growing native plants instead of exotic plant species by YR3 Q4.	N/A – Activities not planned in YR1	To decide to topic and objective of the educational animated tool.

Project Summary	SMART Indicators	Means of Verification	Important Assumptions

Annex 2: Project's full current logframe as presented in the application form (unless changes have been agreed)

Project Summary	SMART Indicators	Means of Verification	Important Assumptions
Impact: (Max 30 words) Plants and habitats of the BVI are better understood and conserved by using science-based management to increase their resilience to environmental change.			
Outcome: (Max 30 words) An integrated suite of biodiversity metrics is routinely implemented across the territory to mitigate against current and future threats.	0.1 Curated collections and presence data enhanced to represent 100% of all known native plant species in BVI and stored as duplicates in Puerto Rico (MAPR) and UK (Kew) herbaria by YR3 Q4, from a baseline of 75% available in Y1. 0.2 Three internationally recognized biodiversity metrics completed for approximately 650 BVI native angiosperms and publicly available by YR3, from a baseline of 5% available in Y1. 0.3 BVI conservation stakeholders use the biodiversity metrics produced in this project to manage local biodiversity, to guide conservation, responding to local threats, and used to inform conservation action planning by Y3. [DPLUS-A03]	0.1 Database comprising BVI's specimens, tissue, and DNA collections at RBG Kew and supplemented with collections at regional herbaria (MAPR) for all ca. 650 native plant species in BVI. 0.2 Map layers containing biodiversity metrics incorporated as GIS layers into NPTVI databases, on the BVI National GIS and other regional stakeholders. 0.3 Published participant list and report for workshops, delivered for local stakeholders and regional partners. Change after training measured by the number of conservation plans developed by stakeholders using the biodiversity metrics. Assessment of gender inclusivity across workshops and outreach activities.	Kew and BVI GIS specialists remain committed to the project, IT equipment, software and infrastructure are fit for purpose at Kew and in BVI. Project partners able to get into the field to collect specimens. Project is not disrupted by major environmental events e.g., hurricanes, pandemics. Online resources are maintained during and beyond the life of the project.
Outputs: **1.** Biobank for the BVI flora established: tissue and DNA of all native plant species from the BVI secured in accessioned collections.	1.1 New tissue samples (with verified herbarium vouchers) collected during fieldwork for the ca. 150 previously non-collected plant species in BVI by YR2 Q4, from a baseline of 75% available in Y1.	1.1 Tissue material collected for at least 150 species and published in fieldwork reports. Data included in Y2 annual report and open access databases (dnabank.science.kew.org, brahmsonline.kew.org/ukot/).	Kew staff are able to travel to the BVI to collect materials. Export and import (e.g., CITES) permits issued for all missing species.

Project Summary	SMART Indicators	Means of Verification	Important Assumptions
	[DPLUS-C09] 1.2 DNA bank created for all plant native species (ca. 650) in the BVI by YR2 Q4, increasing the available DNAs ten times from a baseline in Y1 of 10% of species. [DPLUS-C09] 1.3 Databasing completed for all newly collected materials by YR3 Q4 to achieve a full representation of all ca. 650 native plans in BVI. [DPLUS-C09] 1.4 Collect native plant species presence points to increase our current database by 30% by YR2 Q2, from a baseline of 10,000 points. [DPLUS-C09]	1.2 Report with the results of DNA extractions in Y2 annual report. Accession numbers created in the DNA & Tissue Bank at Kew (dnabank.science.kew.org). 1.3 Herbarium vouchers data recorded and available in database (http://brahmsonline.kew.org/ukot/). Data shared with local partners. 1.4 UKOTs Species and Specimens Database (http://brahmsonline.kew.org/ukot/) updated with new presence points and reported in Y2 annual report.	Being able to locate all the unstudied species. Kew remain committed to maintain and enhance their specimen databases and making these publicly available. Kew's UKOTs team retains capacity to be able to maintain the UKOTs Species and Specimens Database.
2. A complete BVI Plant Tree of Life and biodiversity metrics calculated.	2.1 Generate DNA sequence data and complete the Tree of Life for all native plant species in BVI (ca. 650) by YR2 Q4, from a baseline of 36 species.	2.1 DNA sequence data publicly available in SRA (https://www.ncbi.nlm.nih.gov/sra), and number of sequences produced in Y3 annual report. Phylogenetic analysis completed and a fully resolved phylogenetic tree for all native plants in BVI available. Data shared with Kew Tree of Life Explorer (https://treeoflife.kew.org/).	DNA successfully extracted from problematic species (e.g., containing secondary metabolites, polysaccharides, etc.). The incorporation of new data and maintenance of the Kew Tree of Life Explorer continues at current levels. Sufficient presence points (10-15 per

Project Summary	SMART Indicators	Means of Verification	Important Assumptions
	2.2 Three biodiversity metrics calculated for the entire flora of the BVI: species richness, IUCN Red List assessments and phylogenetic diversity by YR3 Q2. [DPLUS-E03]	2.2 GIS layers available for BVI National GIS containing biodiversity metrics and inputs to generate them. Red List assessments completed, ready to be reviewed and submitted to the IUCN Red List of Threatened Species.	species) available from fieldwork activities and online resources (see methods) to adequately calculate species model distribution for each species.
3. Capacity built for integrating biodiversity metrics into conservation management, action and decision-making.	3.1 At least three NPTVI staff trained and actively collecting herbarium and tissue samples and associated data by YR1 Q4. [DPLUS-A01] 3.2 At least three NPTVI staff trained and step by step manuals produced for interpreting biodiversity metrics data and designing ecological restoration	3.1 List of specimens collected by NPTVI staff included in Y2 annual report. Gender balance measured per fieldwork activity. 3.2 In person workshop conducted for interpretation of biodiversity metrics data. Knowledge change measured by pre- and post-questionnaire, and report of participation by gender.	NPTVI retains trained staff.

Project Summary	SMART Indicators	Means of Verification	Important Assumptions
	plans by YR3 Q4. [DPLUS-A01] 3.3 NPTVI Deputy Director trained to manage and update biodiversity metrics database and use it to design ecological restoration plans. [DPLUS-A01] 3.4 End of project workshop to integrate biodiversity metrics in conservation shared with wider stakeholders, including partners from other Caribbean islands (including overseas territories) by YR3 Q4. [DPLUS-A01]	3.3 Three GIS layers with biodiversity metrics incorporated in NPTVI´s workflow. NPTVI able to produce an ecological restoration plan independently at the end of the project as a result of in person and online support training. 3.4 Report produced assessing the attendance by gender and participation in workshops, inviting representatives from Anguilla, Bermuda, Puerto Rico, TCI, Cayman Islands and Montserrat. Report of a questionnaire on how to use our methods elsewhere.	
4. Biodiversity metrics used to direct conservation action in the face of current and future threats.	4.1 Identify areas with the highest and lowest biodiversity levels and with the highest proportion of threatened plants, per island (Anegada, Tortola, Virgin Gorda), for the 18 Tropical Important Plant Areas (TIPAs) and protected areas to inform conservation management by local stakeholders by YR3 Q2. [DPLUS-B11] [DPLUS-C08] 4.2 NPTVI use the biodiversity metrics generated to provide feedback on future land planning to	4.1 Local stakeholders with access to newly generated map layers with all three biodiversity metrics (species richness, phylogenetic diversity and threatened species) per island, TIPA and protected area. 4.2 NPTVI give a presentation to the Development Planning Committee and the National GIS groups.	Kew staff are able to travel to the BVI to collect materials and new data. We have continued access to high-capacity computing at Kew and capacity to maintain databases. Biodiverse software is maintained. Evidence bases successfully established from outputs 1 and 2.

Project Summary	SMART Indicators	Means of Verification	Important Assumptions
	at least four government departments (Town and Country Planning, Disaster Management and Agriculture and Fisheries Departments, and Environmental Ministry) by YR3 Q2. [DPLUS-A04] [DPLUS-A07]

4.3 At least three ecological restoration plans developed within National Parks using map layers containing biodiversity metrics to respond to biodiversity loss by YR3 Q4. [DPLUS-B01]

4.4 The 2025/26 annual work plan at the J.R. O'Neal Botanic Garden includes propagation of five species per island for ecological restoration that contribute the most to biodiversity. [DPLUS-B02]

4.5 Identification of key plant species to increase habitat resilience based on GIS analysis overlapping biodiversity metrics and ecosystem services data from DPLUS180 and forest resilience by DPLUS084 by YR3 Q4. [DPLUS-B02] | 4.3 At least three ecological restoration plans available: Gorda Peak NP (illegal urbanisation and illegal agriculture), Great Tobago NP (invasive plants and feral goats), and Sandy Cay NP (hurricane impacted). Extract lists of key species from biodiversity metrics map layers to prioritise in ecological restoration produced.

4.4 Planning for 2026 Arbour Day propagation plant list incorporates the five species contributing the most to biodiversity per island.

4.5 At least three ecological restoration plans (lists with species suitable for ecological restoration) developed for areas where GIS layers overlap between this project, DPLUS180 and DPLUS084 layers. | BVI National GIS maintained by BVI Government.

J. R. O'Neal Botanic Garden maintains capacity (facilities and staff) to grow native plants in the nursery. |

Project Summary	SMART Indicators	Means of Verification	Important Assumptions
5. Outreach activities to reinforce the importance of conserving native plant species.	5.1 Educational workshop for schools taken place at JRO'Neal Botanic Garden, on how to extract DNA from plants by YR3 Q4.	5.1 At least three NPTVI staff trained to carry out an experiment with school children, on how to extract DNA from plants, gender balance reported. Demonstration delivered with at least one school group, and with community groups during the Arbour Day. Workshop materials made available for further use in the botanic garden outreach activities.	Kew staff are able to travel to the BVI for training and educational activities.

Appropriate designer is selected to produce cartoon. |
| | 5.2 Produce educational animated tools and activities about the importance of safeguarding native biodiversity and growing native plants instead of exotic plant species by YR3 Q4. | 5.2 Educational animated cartoon to showcase the programme completed and shared on public channels in BVI (social media, local television, etc). Importance of growing native species in BVI the main theme of future Arbour Day activities. Participation report including gender balance attendance. | |

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. Each activity should start on a new line and be no more than approximately 25 words.)

1.1 Collect tissue material from all specimens available at Kew and extract DNA. Quantify the DNA obtained to assess if it is suitable for sequencing methods (see activities in Output 2).

1.2 Conduct fieldwork to collect plant material for ca. 150 native plant species not yet available at RBG Kew (Y1), and for any species not passing the DNA quality check in Activity 1.1 (Y2). Database all new herbarium and tissue samples.

1.3.1 Extract DNA from newly collected materials. Confirm appropriate amounts of DNA were extracted as expected from recently collected materials.

1.3.2 Database all DNAs and incorporate them in the DNA Bank and Tissue collection at RBG Kew.

1.4 Conduct fieldwork and carry out inventory lists of species in areas with low number of presence data, including areas that will be targeted for ecological restoration plans (Y1).

2.1.1 Process samples to generate genetic sequence data for all native plant species in BVI (ca. 650).

2.1.2 Conduct bioinformatic analysis and reconstruct a phylogenetic tree including all native plant species in BVI. Share the data with our colleagues from the Tree of Life Explorer (https://treeoflife.kew.org/).

2.2.1 Run species distribution models for all native plant species in BVI.

2.2.2 Generate a map layer with estimates of species richness using the output from 2.3.1

Project Summary	SMART Indicators	Means of Verification	Important Assumptions

2.2.3 Conduct conservation assessments and write a full Red List for all native angiosperms in BVI.

2.2.4 Integrate all data in the Biodiverse software to calculate phylogenetic diversity and expected loss of Phylogenetic Diversity across the territory.

3.1 In-person training during Y1 fieldwork for tissue collection for DNA and herbarium.

3.2 In-person workshop with BVI staff for understanding biodiversity metrics use and interpretation of results.

3.3 In-person and online follow-up sessions in Y3 to train NPTVI staff responsible of conservation management decisions (Deputy Director) on using biodiversity metrics.

3.4 Organize an online workshop inviting colleagues and stakeholders from neighbouring islands. Report preparation to assess the attendance by gender and participation in workshops.

4.1 GIS analysis to prepare maps with biodiversity metrics, and lists of species, split by island, Tropical Important Plant Area (TIPA) and protected area.

4.2 Presentation preparation by NPTVI Deputy Director for explaining to different government departments about using biodiversity metrics in development planning.

4.3.1 List inventories prepared for three sites withing National Parks targets.

4.3.2 Species richness and threatened species lists within these areas extracted from the main database.

4.3.3 Analysis of biodiversity metrics to produce a list of key species for ecological restoration for Gorda Peak National Park (NP), Great Tobago NP, and Sandy Cay NP; and others if identified by NPTVI.

4.4 Extract lists of species per island with those contributing more to biodiversity. Share these data with NPTVI for integration in the 2025/26 annual work plan for growing plants.

4.5.1 GIS analysis overlapping habitat resilience to climate change from DPLUS180 and to extreme weather events from DPLUS084 with the biodiversity metrics herein developed.

4.5.2 Produce a list of key species per habitat in the context of climate change and their contributions to biodiversity.

5.1.1 Preparation of report explaining step by step the practical for DNA extraction.

5.1.2 Demonstration with NPTVI staff and training session. Demonstration with school group at J.R. O'Neal Botanic Garden.

5.2 Script and story preparation for educational animated cartoon. Production of the cartoons.

Annex 3: Standard Indicators

Table 1   Project Standard Indicators

Standard indicator code	Standard indicator description	Original indicator in project	Units	Disaggregation	Y1	Y2	Y3	Total	Total planned
Group A: Capability and Capacity									
DPLUS-A01	Number of people from key national and local stakeholders completing structured and relevant training.	3.1 At least three NPTVI staff trained and actively collecting herbarium and tissue samples and associated data by YR1 Q4. 3.2 At least three NPTVI staff trained and step by step manuals produced for interpreting biodiversity metrics data and designing ecological restoration plans by YR3 Q4. 3.3 NPTVI Deputy Director trained to manage and update biodiversity metrics database and use it to design ecological restoration plans. 3.4 End of project workshop to integrate biodiversity metrics in conservation shared with wider stakeholders, including partners from other Caribbean islands (including overseas territories) by YR3 Q4.	People Proportion	Gender (female/male) Age Group; Stakeholder group: Local Communities, Nationals, public sector, civil society, private sector; Training typology (biodiversity, sustainable development, finance, programme management, safeguarding, gender etc.) Proportion of trained people employed by their host organisation at the end of the project.	4/5 NA NA NA			9 NA NA NA	3 3 1 TBD
DPLUS-A03	Number of local/national organisations with improved capability and capacity as a result of project.	0.3 BVI conservation stakeholders use biodiversity metrics to respond to different threats, directing their	Number of organisations	Organisation type	NA			NA	1

		conservation action planning by Y3.							
DPLUS-A04	Number of people reporting that they are applying new capabilities (skills and knowledge) 6 (or more) months after training.	4.2 NPTVI provide feedback on future planning based on biodiversity metrics to at least three government departments (Town and Country Planning, Disaster Management and Agriculture and Fisheries Departments).	People	Gender; Age Group; Stakeholder group: Local Communities, Nationals, public sector, civil society, private sector; Training typology (biodiversity, sustainable development, finance, programme management, safeguarding, gender etc.).	NA			NA	3
DPLUS-A07	Number of government institutions/departments with enhanced awareness and understanding of biodiversity and associated local community issues	Same as above: 4.2	Government institutions	Govt. Organisation Type (local, national, treasury, planning, environmental, agricultural, forestry)	NA			NA	3
DPLUS-B01	Number of new/improved habitat management plans available and endorsed.	4.3 At least three ecological restoration plans developed within National Parks using map layers containing biodiversity metrics to respond to biodiversity loss by YR3 Q4.	Number	Languages (local/other); Biome/Ecosystem/Habitat; Typology of habitat management plans.	NA			NA	3

DPLUS-B02	Number of new/improved species management plans available and endorsed	4.4 The 2025/26 annual work plan at the J.R. O'Neal Botanic Garden includes propagation of five species per island for ecological restoration that contribute the most to biodiversity. 4.5 Identification of key plant species to increase habitat resilience based on GIS analysis overlapping biodiversity metrics and ecosystem services data from DPLUS180 and forest resilience by DPLUS084 by YR3 Q4.	Number	Languages (local/other); Typology of species management plans; (Harvest, Trade, Invasive species management, recovery, reintroduction, ex-situ).	NA NA			NA NA	3 TBD
DPLUS-B11	Area identified as important for biodiversity	4.1 Identify areas with the highest and lowest biodiversity levels and with the highest proportion of threatened plants, per island, Tropical Important Plant Area (TIPA) and protected areas to inform conservation management by local stakeholders by YR3 Q2.	Area (hectare)	Biome/Ecosystem/Habitat.	NA			NA	TBD
Group C: Evidence and Best Practices									
DPLUS-C08	Areas of importance for biodiversity identified	Repeated, same as 4.1	Area (hectare)	Identified/Protected/Identified and Protected; Types/schemes: Key Biodiversity Areas (Important Bird and Biodiversity Areas, Important Plant Areas, Alliance for Zero Extinction sites), High Conservation Value Areas, Vulnerable Marine	NA			NA	TBD

				Ecosystem, etc.					
DPLUS-C09	Species reference collections made (known to science, new to science).	1.1 New tissue samples (with verified herbarium vouchers) collected during fieldwork for the ca. 150 previously non-collected plant species in BVI by YR2 Q4, from a baseline of 75% available in Y1.	Number	Taxa (Flora/Fauna/Fungi)	690			690	150
		1.2 DNA bank created for all plant native species (ca. 650) in the BVI by YR2 Q4, increasing the available DNAs ten times from a baseline in Y1 of 10% of species.			533			533	650
		1.3 Databasing completed for all newly collected materials by YR3 Q4 to achieve a full representation of all ca. 650 native plans in BVI.			690			690	At least 650
		1.4 Collect native plant species presence points to increase our current database by 30% by YR2 Q2, from a baseline of 10,000 points.			6941			6941	3000
Group D: Sustainable Benefits to People, Biodiversity and Climate									
Group E: Impact on Biodiversity and People									
DPLUS-E03	Status of Threatened Species (DEFRA KPI)	2.2 Three biodiversity metrics calculated for the entire flora of the BVI: species richness, IUCN Red List assessments and phylogenetic diversity by YR3 Q2.	tbc	Taxa, Biome/Ecosystem/Habitat, Treats reduced	NA			NA	3

Annex 4: Onwards – supplementary material (optional but encouraged as evidence of project achievement)

Appendix 1. Samples of 533 species of BVI species collected from Kew collections (Kew Herbarium, DNA and Tissue Bank, or Living Collection).

Appendix 2. Target list of species for fieldwork. Status refers to being collected ("YES"), to be discarded from BVI list due to taxonomic changes or being considered non-native ("DELETE"), or pendant to be collected (blank).

Appendix 3. British Virgin Islands November-December 2023 fieldwork report. Overseas Fieldwork Committee (OFC) registration number 998-01

Appendix 4. British Virgin Islands March 2024 fieldwork Report. Overseas Fieldwork Committee (OFC) registration number 998-02

Appendix 5. Tree of Life for half of the BVI flora completed, including 455 samples. Names of the samples include the internal sequencing code, family, species name, and percentage of sequence recovery from the total length recoverable for 353 nuclear genes.

Appendix 6. Table of Project Activities with Roles and Responsibilities of the Project Team.

Appendix 7. Monitoring and Evaluation document for DPLUS183.

Appendix 8 and 9. Slides of the presentations given by Colin Clubbe and Nancy Woodfield Pascoe in the 2024 Botanical Bridges Congress (Colombia, February 12-16, 2024).

Checklist for submission

	Check
Different reporting templates have different questions, and it is important you use the correct one. Have you checked you have used the **correct template** (checking fund, type of report (i.e. Annual or Final), and year) and **deleted the blue guidance text** before submission?	X
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Have you included means of verification? You should not submit every project document, but the main outputs and a selection of the others would strengthen the report.	X
If you are submitting photos for publicity purposes, do these meet the outlined requirements (see section 15)?	
Have you involved your partners in preparation of the report and named the main contributors	X
Have you completed the Project Expenditure table fully?	X
Do not include claim forms or other communications with this report.	