

## Darwin Plus: Final Report

To be completed with reference to the "Project Reporting Information Note":  
(<https://darwinplus.org.uk/resources/information-notes/>).

It is expected that this report will be a **maximum of 20 pages** in length, excluding annexes.

**Submission Deadline: no later than 3 months after agreed end date.**

**Submit to:** [BCF-Reports@niras.com](mailto:BCF-Reports@niras.com) including your project ref in the subject line.

### Darwin Plus Project Information

Project reference	DPLUS150
Project title	Ecosystem sensitivity and climate vulnerability for MSP in the BVI
Territory(ies)	British Virgin Islands (BVI)
Lead Partner	National Oceanography Centre
Project partner(s)	Ministry of Natural Resources, Labour and Immigration Joint Nature Conservation Committee Wood Plc.
Darwin Plus Grant value	£356,764
Start/end date of project	01/07/2021 – 30/06/2023
Project Leader name	James Strong
Project website/Twitter/blog etc.	
Report author(s) and date	James Strong (7 <sup>th</sup> September 2023)

## 1 Project Summary

The marine environment can be effectively managed using Marine Spatial Planning (MSP - similar in concept to planning on land). However, extra tools are required to consider the impacts of human activities on marine habitats. This project will expand, integrate and enhance existing tools and outputs developed by the project partners to create a new ES-CV tool covering both the marine and terrestrial environment, including representation of human-environment interactions and impacts, and existing indicators to track change in the environment. MSP remains the most effective mechanism for managing damaging human activities and protecting vulnerable marine features. The proposed tool and process will enable MSP issues in the BVI to be addressed and allow the MNRL&I to produce marine spatial plans based on integrated datasets and more holistic planning considerations for the foreseeable future. The tools proposed here will greatly facilitate the production of marine spatial plans by in-country partners.

## 2 Project Partnerships

The National Oceanography Centre UK (NOC) were be the lead organisation and were responsible for coordinating the work between the partners as well as monitoring the progress of the project. NOC and JNCC provided the Marine Spatial Planning (MSP) structure for the planned Ecosystem Sensitivity & Climate Vulnerability (ES-CV) tool (modifications to be implemented by WSP) which was developed as the primary output of this project.

Joint Nature Conservation Committee (JNCC), along with NOC, translated the underpinning MSP linking tools for local conditions in the BVI and integrated the activities/pressures matrices (JNCC), sensitivity matrix (JNCC) and new Coastal Resource Atlas (D-PLUS152) into the ES-CV planning tool. JNCC and NOC oversaw the integration of the different work package tool into the Ecosystem Sensitivity & Climate Vulnerability (ES-CV) tool by WSP (sub-contractor). JNCC and Wood have previously collaborated to assess the value of marine-terrestrial

ecosystem services across the BVI, both in terms of service provision and hazard mitigation, the learning of which were be directly incorporated within this project.

Ministry of Natural Resources, Labour and Immigration (BVI Gov) was both an active partner in the project as well as the main beneficiary for the project. They have kindly provided staff time as an in-kind contribution. This time was used to provide the required specification and format for project outputs as well directly contributing to the production of specific deliverables.

The Joint Nature Conservation Committee (JNCC) have coordinated the development of an appropriate classification for the main seabed habitats in the BVI. The coordination role ensured that the Coastal Resource Atlas is compatible with the ES-CV tool being developed in DPlus150 and is of most value for local stakeholders. To refine this process, JNCC ran a workshop in the BVI (week commencing 30th January 2023 - two bouts lasting 4 hour). The workshop examined the following topics of relevance to DPlus152: (i) the habitat classes we're using in the outputs; and (ii) the habitat descriptions we developed from the literature and emails with input from key stakeholder. Invited attendees at the workshop included Argel Horton, Mervin Hastings, Rozina Norris-Gumbs, Stacey Austin, and Joseph Smith Abbott (Ministry of Natural Resources, Labour, and Immigration - MNRLI); Shannon Gore (Coastal Management Consulting and the Association of Reef Keepers); Tessa Smith Claxton, Theodore James, Atoya George (Department of Agriculture and Fisheries, Ministry of Education, Culture, Youth Affairs, Fisheries and Agriculture) and Susan Zaluski (H. Lavity Stoutt Community College). JNCC have also kindly provided previously collated seabed observations to the project.

### **3 Project Achievements**

#### **3.1 Outputs**

We are pleased to reported that Output 1 (Pressures/ Activities Matrix developed for BVI), Output 2 (Sensitivity Assessment for Marine and Coastal habitats in BVI), Output 3 (Review available cumulative impact assessment methods and assess feasibility for use in the BVI), Output 4 (Translation and integration of existing marine management tools into the ES-CV tool (activity to pressures matrices; sensitivity matrices; and options for considering cumulative impacts) and Output 5 (Stakeholder engagement to understand: (i) the required format for the ES-CV tool to ensure its compatible with existing management measures; (ii) presence and intensity of human pressures; (iii) distribution of key habitats and the availability of information for estimating sensitivity; and (iv) the training requirements needed to maximise stakeholder use of the ES-CV tool) have all been achieved. With regard the key project activities that evidence delivery, the following activities were completed during the duration of the project:

- List the human activities within the marine environment or directly influencing the marine environment (evidence: see Annual report 2022)
- Undertake literature review on sensitivity of BVI's marine and coastal habitats to pressures, following agreed assessment method (evidence: report available on request)
- Collate existing information and classifications for BVI marine environment (WP 2.1 evidence: undertaken as part of both DPlus 150 and 152 and documented in the Coastal Resource Atlas 2 delivery report)
- Develop a sensitivity assessment method based on available information, using MarESA as a framework (WP 2.2 evidence: matrix and report complete and currently being integrated into the ES-CV).
- At the workshop held in WP2, capacity building to develop understanding of sensitivity assessments and review the draft sensitivity assessments with local stakeholders (WP 2.3 evidence: workshop delivered by JNCC)
- Consult with in-country experts to sense check outputs (evidence: workshop delivered by JNCC, online meetings and email chains. We must acknowledge the significant contribution provided by Dr Shannon Gore in facilitating this and other activities (WP 2.4).

- Review and assess the feasibility of incorporating a cumulative impact assessment method within the ESCV framework and tool. (WP 3.1 evidence: cumulative impact assessment review / see annual report 2022)
- Integrate the activity/pressure (WP1) and sensitivity matrix (WP2) into the ESCV framework (WP 4.1. evidence: see ESCV handbook produced by WSP).
- Produce ESCV tools for stakeholders (WP 4.2 evidence: see ESCV handbook produced by WSP).
- A full day of training, followed by an official hand-over event, marked the successful delivery of both Darwin Plus projects DPLUS152 and DPLU150 (WP 5.1 evidence: please see collated evidence document attached). The objective for the Darwin Plus project 152 was to produce a new, full-coverage, marine habitat map for the BVI (Coastal Resource Atlas 2) and provides detailing information on the distribution of dominant substrates, geomorphology, habitat classes (EUNIS habitat classification) and the suitable habitat for 11 common species groupings/biotopes (e.g. branched coral, massive coral, seafans, soft corals, native seagrass, and calcareous macroalgae).
- Contributions for the presentations and training provided included input for all of the partners involved from the two projects, namely, National Oceanography Centre (Lead on both projects), Ministry of Natural Resources, Climate Change and Labour, the Joint Nature Conservation Committee, National Parks Trust of the Virgin Islands, Dr Shannon Gore (Association of Reef Keepers) and WSP UK Limited. The training and hand-over event was well attended by representatives of:
  - The Ministry Natural Resources, Climate Change and Labour
  - Survey Department
  - Department of Agriculture and Fisheries
  - Town and Country Planning
  - VI Shipping Registry
  - Project partners present included NOC, WSP, National Parks Trust VI and JNCC

### 3.2 Outcome

The project successfully delivered all of the work packages listed in the original proposal and met its intended outcome. As outputs 1 to 5 were achieved, we are confident that the intended outcome of a 'step-change in the level sophistication and capability of marine management in the BVI along with an ability to integrate climate vulnerability and facilitation of MSP' has been achieved (ESCV overview provided in Figure 1).

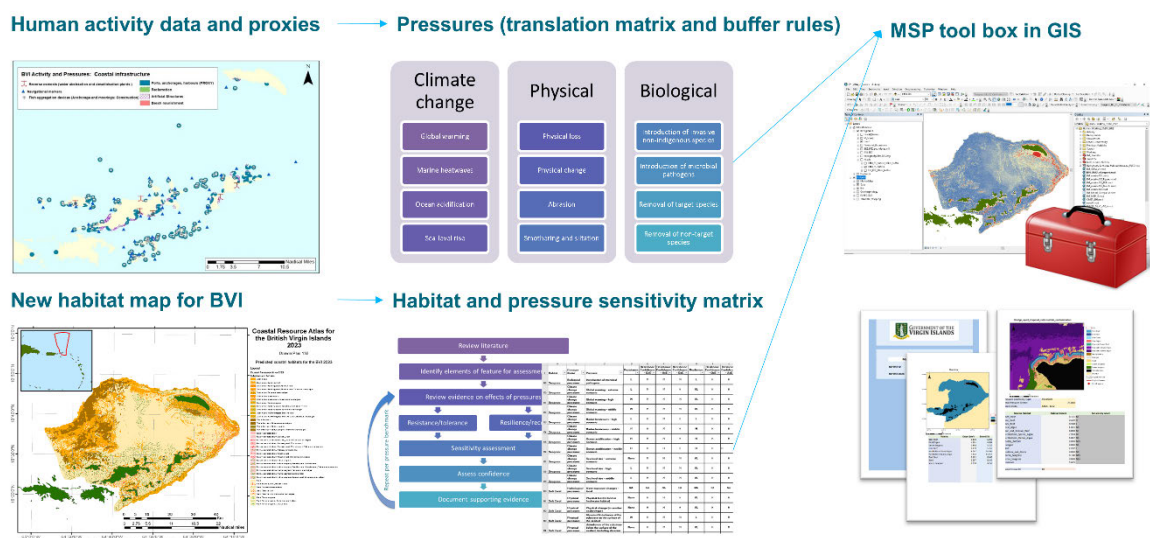


Figure 1. Overview of the MSP toolbox.

DPLUS 150 exceeded its deliverables by providing additional outputs. These were included as it was apparent that the BVI doesn't have its own spatial data, collated centrally, to represent the human pressures active in their waters. This was known about at the being of the project but sourcing or generating this information was thought to be beyond the scope of the project and its available resources. However, it became apparent that the adoption and value of the ES-CV tool would be greatly increased if it was operational on delivery. As such, spatial data, or spatial proxies to represent missing spatial data, has been included in the ES-CV tool. The inclusion of these products transforms the ES-CV tool from a framework, that needed additional inputs from the BVI gov to make it fully operational, to a fully operational product on delivery. This has required a significant additional input from NOC but as been deemed a significant success in transforming the immediate value of the final output from DPLUS150.

### **3.3 Monitoring of assumptions**

Given that the ESCV tool required parallel and sequential development of outputs, monitoring of process was important for project delivery. The specific assumptions associated with the project were: (i) that resulting management practices, based on the assessments provided by the ES-CV spatial planning tool, are adopted; (ii) the BVI Government and stakeholders maintain commitment to the project; (iii) BVIG have mechanisms in place to implement the management practices derived from the use of the ES-CV tool; (iv) BVIG Departments have ability to work cooperatively across land sea boundaries; (v) national projects requiring the ES-CV tool are not delayed further due to COVID-19 and related impacts, (vi) BVI Government remain engaged and supportive of the project; (vii) absence of natural hazards and disasters allow workshop to take place; and (viii) there is data and information on habitat sensitivities is openly available.

With regard to assumption associated with output 2 ("There is data and information on habitat sensitivities is openly available"), the entire evidence base needed for the sensitivity matrix was freely available with no restrictions on the access of information. For the assumption associated with output 4, the data sources required for the: (i) identify and locate human activities; and (ii) describe and delineate the main marine habitats (via DPlus152) were all of the required resolution, format and availability. As for the assumption associated with output 5, NOC believe that, overall, we have maintained good working relationships between project partners and stakeholders during the project. Again, it should be highlighted that the lead, J. Strong, failed somewhat to maintain sufficient communication between project partners across the two Darwin Plus projects. This did cause some strain within the partners. However, this was a temporary situation and easily corrected through scheduling more meetings and consolation. The final assumption, i.e. the "integration of WP components into the ESCV is not dependent on any one WP component" has been met as all components (including an extra one for the human activities data) has been created and merged successfully within the ES-CV tool. We can confirm that all assumptions were met and there were no changes needed for the delivery of the project.

## **4 Contribution to Darwin Plus Programme Objectives**

### **4.1 Project support to environmental and/or climate outcomes in the UKOTs**

With regard the broad themes of Darwin Plus, we believe DPLUS150 (with aspects of DPLUS152) has, by providing an operational Marine Spatial Planning (MSP) system, contributed significantly to the conservation of marine biodiversity (as MSP is widely accepted to be a credible method of managing marine estates). Given that the sensitivity matrices within the ESCV tool also include the sensitivity of marine habitats to climate change related pressures, we also believe that outputs provided are useful in predicting and mitigating the effects of climate change on the marine environment. Furthermore, as MSP is a holistic management approach, and the extent of the spatial data (Coastal Resource Atlas 2), the use of the ESCV tool will generate wide ranging levels of management capability of the shelf waters of the BVI. This in turn will generate long-term environmental improvements and prevent further loss of habitat through poorly placed human activities.

This project is timely in view of the BVI government's Green Paper; Environmental Management Climate Adaptation and Sustainable Development. The Bill specifically identifies

the need for “institutional structures and procedures” (such as MSP) to manage (amongst others), “biodiversity conservation” and “marine pollution” and meet “International commitments under multilateral environmental agreements (MEAs)”. These include the Nagoya Protocol and international agreements related to oil pollution.

The project has also supported the Sustainable Development Goal 14 in the BVI i.e., contributing to the sustainable management and protection of marine and coastal ecosystems, the Ramsar and Cartagena Convention. Further Multilateral Environmental Agreements important to biodiversity are applicable to the BVI as a result of their ratification by the UK (e.g. Ramsar Convention, Cartagena Convention). Associated with these ambitions, MSP is implicit in the Bill’s objective of establishing a Natural Resources Inventory and addressing biodiversity conservation more generally.

Finally, the Virgin Islands Strategic Blue Economy Roadmap (2020–2025) states “A focus on spatial planning and cumulative environmental impact assessment should be adopted...” as a high priority (short term). This project has actively contributed to national policy development through the delivery of MSP capabilities through the ESCV tool, thereby supporting implementation of the BVI Comprehensive Disaster Management Strategy, BVI National Physical Development Plan and BVI Natural Resources Strategy.

**4.2 Gender equality and social inclusion**

Please quantify the proportion of women on the Project Board <sup>1</sup> .	53 %
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 <sup>2</sup> .	50 % (the project’s primary points of senior contact at the NPTVI, JNCC and MNR&L are all female)

**5 Monitoring and evaluation**

Specific project partners are responsible for individual outputs, and these partners have been tasked with monitoring and evaluating the delivery of these outputs. To-date, this process has been successful. The project lead (NOC) has also maintained oversight over the entire project and links to the other associated DPLUS (152) project. The communication of overall progress within the project is typically promogulated to other partners via update emails. In hindsight, this method has not been sufficient to keep all stakeholders updated during the project. The shortcomings of the system were pointed by a partner and additional meetings were quickly scheduled to increase the flow of information both within and between projects.

There have been no major changes in the project design or logframe during the lifetime of the project. The M&E system was moderately helpful over the project. There are no planned internal or external evaluation event for the work delivered. However, if these opportunities arose in the future, we would welcome their feedback.

**6 Actions taken in response to Annual Report reviews**

As our project proceeded to plan, and that a dependency on DPLUS152 was met in a timely manner, the feedback on the annual reports was positive and provided no recommendations for implementation.

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<sup>1</sup> 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.

<sup>2</sup> 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.

## **7 Lessons learnt**

It must be acknowledged that NOC has not sustained a sufficient level of dialogue between partners across the two DPlus projects enough. The National Parks Trust rightly indicated to NOC that communication had been lacking and they were concerned about alignment of products between the two DPlus projects. The lead for both projects (J. Strong) acknowledges this shortfall and has scheduled meetings to improve the flow of information and progress reports between the two projects and be inclusive of all project partners. In the future, it would be valuable to schedule regular online meetings (rather than scheduled ad-hoc) at the beginning of the project and commit to regular contact so that all partners can communicate effectively.

## **8 Risk Management**

No new risks have emerged in the last 12 months. If anything, risks, typically associated with COVID restrictions, have eased significantly.

## **9 Sustainability and Legacy**

The final training session of the ESCV tool was well attended by representatives from many bodies (Gov, NGOs, academia). This really helped boost the profile of the project within the BVI. Additional presentations were also done to various charities and the Governor's Office. The absolute necessity for the Ministry to be implementing MSP means that the project will have an enduring legacy locally. It has also been flagged that many of the components of the ESCV tool can be transferred to other countries with similar habitats and human activities. After the project, NOC and WSP will maintain contact with the Ministry to offer support for the ESCV tool should it develop a fault. NOC and WSP are offering additional training sessions, outside of the DPLUS150 lifespan, to the National Parks Trust Virgin Islands, to further the uptake of the delivered tools.

## **10 Darwin Plus Identity**

The most important event for highlighting the profile of both Darwin Plus projects was the presentation of the outputs for both projects to the Hon Dr. Natalio Wheatley, Prime Minister of the British Virgin Islands (BVI), during a visit to the NOC in February 2023. The press release for this event is included below:

“Last week the NOC was delighted to meet with the Hon Dr. Natalio Wheatley, Prime Minister of the British Virgin Islands (BVI), who was accompanied by colleagues from the BVI London Office. During the meeting, the NOC presented a historic account of our long-standing relationship and details of two ongoing marine scientific research projects funded via Darwin Plus, DPLU150 and DPLUS152. Both projects not only support capacity development of local stakeholders but provide data that will be vitally important in support of the BVI's efforts to manage their marine estate. In parallel these data will be critical in the BVI's efforts to promote their carbon reduction credentials, providing access to carbon markets and enabling the development of partnerships that support carbon removal initiatives. NOC lead scientist Dr. James Strong presented recently produced outputs from the Darwin Plus projects, which included a harmonised bathymetric surface (merged from both LiDAR and multibeam echosounder surveys), a seabed imagery data set consisting of over 500 historical observations and 340 additional stations visited during fieldwork in 2022, and some of the recently modelled maps that'll represent the new Coastal Resource Atlas for the BVI (i.e. full coverage maps for various geomorphological features, habitat and species – DPLU152). Finally, Dr. Strong outlined the structure of a toolbox of Marine Spatial Planning tools (produced in conjunction with the Ministry of Natural Resources and Labour (BVI), the Joint Nature Conservation Committee (UK) and WSP Global Inc. - DPLU150), that has been calibrated for marine habitats and human activities in the BVI. These tools will allow local policymakers to exploit fully the new Coastal Resource Atlas, quickly draft marine spatial plans and bring about a step-change in marine management capabilities locally.

The NOC would like to thank Dr Wassim Dbouk of the University of Southampton who organised the visit.”

Furthermore, the visit was also covered by press within the BVI (see the link below). Of particular note is the quote:

“Premier Wheatley also counted a meeting held with the UK’s National Oceanographic Centre as a triumph, describing it as “amazing”.

“We will soon be presented with the data from the environmental mapping. And that has huge implications for us,” he stated.

“I’m not sure how familiar persons in the Virgin Islands are with carbon markets, but carbon markets basically essentially, we have carbon emissions in the world and there are companies who want to be able to offset their carbon emissions,” Dr Wheatley explained.

Premier Wheatley further explained that these endeavours have an economic value. “And so they’re willing to fund projects that will help to preserve [the] environment and do other types of environmental projects.”

<https://bvinews.com/southampton-mou-a-major-achievement-premier/>

Additional press releases were prepared by the Governors’ House (BVI) “A full day of training, followed by an official hand-over event, marked the successful delivery of both Darwin Plus projects DPLUS152 and DPLU150. The objective for the Darwin Plus project 152 was produce a new, full-coverage, marine habitat map for the BVI (Coastal Resource Atlas 2) and provides detailing information on the distribution of dominant substrates, geomorphology, habitat classes (EUNIS habitat classification) and the suitable habitat for 11 common species groupings/biotopes (e.g. branched coral, massive coral, seafans, soft corals, native seagrass, and calcareous macroalgae).

Project 150 developed a set of interpretative tools that, when used with the new habitat map, estimating the sensitivity of local marine habitats, predicts the footprint of human activities in marine environment, and how these two aspects can be managed and promoted together in a sustainable manner i.e., the basis for a marine spatial planning system. These tools have been merged into a single system that facilitates the rapid querying of spatial data to provide detailed information on the uses and priorities of an area.

Contributions for the presentations and training provided included input for all of the partners involved from the two projects, namely, National Oceanography Centre (Lead on both projects), Ministry of Natural Resources, Climate Change and Labour, the Joint Nature Conservation Committee, National Parks Trust of the Virgin Islands, Dr Shannon Gore (Association of Reef Keepers) and WSP Global Inc. The training and hand-over event was well attended by representatives of:

- The Ministry Natural Resources
- Survey Department
- Department of Agriculture and Fisheries
- Town and Country Planning
- VI Shipping Registry
- Project partners present included NOC, WSP, National Parks Trust VI and JNCC

## 11 Safeguarding

Has your Safeguarding Policy been updated in the past 12 months?	No
Have any concerns been investigated in the past 12 months	No
Does your project have a Safeguarding focal point?	Yes, James Strong (PI)
Has the focal point attended any formal training in the last 12 months?	No. James Strong has attended Active Bystander training.
What proportion (and number) of project staff have received formal training on Safeguarding?	Past: 0% [0] Planned: 0% [0]
Has there been any lessons learnt or challenges on Safeguarding in the past 12 months?	
Need for staff to attend for safeguarding training.	

## 12 Finance and administration

### 12.1 Project expenditure

Project spend (indicative) since last Annual Report	2023/24 Grant (£)	2023/24 Total actual Darwin Plus Costs (£)	Variance %	Comments (please explain significant variances)
Staff costs				
Overhead Costs				Includes audit fees
Travel and subsistence				Over budgeted
Others				Norsys Software
<b>TOTAL</b>	£34,888	£34,418.59		

Staff employed (Name and position)	Cost (£)
NOC – James Strong - PI	
NOC – Lynda Haller - PM	
NOC – Charlotte Francoz - Researcher	
<b>TOTAL</b>	£12,733.52

Other items – description	Other items – cost (£)
Netica Application and GeoNetica	
<b>TOTAL</b>	

### 12.2 Additional funds or in-kind contributions secured

Source of funding for project lifetime	Total (£)
<b>TOTAL</b>	0

Source of funding for additional work after project lifetime	Total (£)
<b>TOTAL</b>	0

### 12.3 Value for Money

This project provided significant value for money by harnessing existing information, concepts and dataset. The human activity to pressure matrix was translated from a similar product used in MSP in the UK. The sensitivity matrix used: (i) ouptus from another project in the Turks and Caicos Island; (ii) the wealth of information in the scientific literature; and (iii) information already extracted for the sensitivity matrices developed for temperate waters. The design of the ESCV tool used the framework for a terrestrial planning tool already adopted within the BVI (also produced by Wood PLC, later WSP, in a previous project). Finally, the importation of the habitat map from DPLUS152 also capitalised on information produced in other projects. These efficiencies allowed us to reduce our required resource, which was factored into the proposal budget from the start, and ensure deliver.

## 13 OPTIONAL: Outstanding achievements of your project (300-400 words maximum). This section may be used for publicity purposes.



**Annex 1: Report of progress and achievements against logframe for Financial Year 2022-2023 – if applicable**

Project summary	SMART Indicators	Progress and Achievements April 2022 - March 2023	Actions required/planned for next period
<p><b>Impact</b></p> <p>Improved protection of marine living resources and sustainable management of human activities; the promotion of the Blue Economy; and improved transparency and understanding of marine management processes</p>		<p>The project deliverable form the basic foundation for MSP in the BVI and we are confident that impact, post-project, will be significant for the sustainable use of marine resources.</p>	
<p><b>Outcome</b></p> <p>Step-change in the level sophistication and capability of marine management in the BVI along with an ability to integrate climate vulnerability and facilitation of MSP</p>	<p>0.1 Adoption of the ES-CV tool with the workflow generating marine management advice and actions by March 2023 0.2 Identification of the ES-CV as a key tool supporting marine spatial planning in the BVI by March 2023 0.3 Ability to conduct spatial analyses across the land/sea boundary by March 2023</p>	<p>The first indicator (“0.1 Adoption of the ES-CV tool with the workflow generating marine management advice and actions by March 2023”) is clearly not currently met. This is due to the planned hand-over and training occurring in June rather than March. On receipt of the data, training and reports, we hope that the BVI Government will have all the tools and spatial data needed to start generating spatial plans for their waters.</p> <p>The second indicator is complete. indicator 0.3, can only occur after the delivery of the end products at the end of the project. Once delivered, we then hope to gain the testimonials on the value and capability of the ES-CV tools from in-country practitioners. Equally, outcome indicators such as 0.2, 0.3 and 0.4 will all be generated after delivery of the products. In</p>	<p>To overcome issues identified, project staff will consult with the Ministry (delivery body for MSP in the BVI) during the in-country training to understand the timeline for implementing the MS-CV tool.)</p>

Project summary	SMART Indicators	Progress and Achievements April 2022 - March 2023	Actions required/planned for next period
		hindsight, these indicators are likely to become available after the lifetime of the project and are perhaps not the most adequate measures.	
<b>Output 1.</b> Pressures/ Activities Matrix developed for BVI	Pressures/ Activities Matrix developed for BVI chapter in report	The action within output 1 has been delivered in full. The resulting pressure / activity matrix can be source from NOC or JNCC on request. The final matrix will also be delivered to the project partners and stakeholders during the 'hand-over' event in June 2023. There is also a report that accompanies the matrix, which is also now complete.	
Activity 1.1 Pressures/ Activities matrix developed for BVI consultation by end Sept 21		Complete	
Activity 1.2 Pressures/ Activities review workshop by end of Nov 21		Complete	
Activity 1.3 Pressures/ Activities matrix finalised and associated methodologies reported by Jan 22		Complete	
<b>Output 2.</b> Sensitivity Assessment for Marine and Coastal habitats in BVI	Sensitivity Assessment for Marine and Coastal habitats in BVI chapter in report	This entire output is now also complete. The full sensitivity assessment has been shared by JNCC with Wood Plc and NOC so that it can be fully integrated within the other products. There is an individual written sensitivity assessment per habitat for the 8 habitats assessed in full and an accompanying report that details the methods and evidence base assessed during the production of the assessment. The final assessment required a lot of communication between project partners, and Darwin projects, to ensure that it aligned with the GIS tools, the demands of the in-country stakeholders and the new Coastal Resource Atlas produced in DPlus152.	
Activity 2.1 Sensitivity assessment method agreed by Nov 21		Complete	
Activity 2.2. Sensitivity scores for BVI marine habitats compiled with associated evidence base by July 22		Complete	

Project summary	SMART Indicators	Progress and Achievements April 2022 - March 2023	Actions required/planned for next period
Activity 2.3 Stakeholder consultation to agree final sensitivity outputs by Sept 22		Complete	
Activity 2.4 Pressures/ activities and sensitivity assessment for BVI Report finalised by October 22		Complete	
<b>Output 3.</b> Review available cumulative impact assessment methods and assess feasibility for use in the BVI	Review available cumulative impact assessment methods and assess feasibility for use in the BVI	This output has been completed, in-full, and reported in the 2022 annual report. The review highlighted 10 existing cumulative impact approaches and tools. The review then focused on just four tools what are freely available and complete	
Activity 3.1. Review and testing of cumulative impacts assessments suitable for BVI – report by Nov 2022		Complete	
Activity 3.2. Stakeholder consultation on differing cumulative impacts assessments Dec 2022		Complete	
Activity 3.3. Revise suitability report with stakeholder consultation by Jan 2023		Complete	
<b>Output 4.</b>	Translation and integration of existing marine management tools into the ES-CV tool (activity to pressures matrices; sensitivity matrices; and options for considering cumulative impacts).	This output is the last deliverable and is 90% complete. Wood Plc are leading this task. This output could only be progressed once all of the other project outputs had been completed. With regard to specific steps in the log frame, we can report the following progress under the activity/indicators.	
Activity 4.1 Presence of two tools encoded in the ES-CV tool by Jan 2023		Complete	
Activity 4.2 Construct matrix detailing the structure of the tool and how tools interact by Jan 2023		Complete	
Activity 4.3 Hosting of the ES-CV tool on the National GIS system within the Government of the BVI by March 2023		This has not been met yet. We intend to provide training on how to use the ES-CV tool before we deliver it to the BVI government. As	To be done in June 2023

Project summary	SMART Indicators	Progress and Achievements April 2022 - March 2023	Actions required/planned for next period
		such, we see that this is likely to be met two weeks for the training (so that the tool is embedded in their IT systems before we commence the training). Current completion planned for the end of May 2023.	
Activity 4.4 Recommendations on the use and maintenance of spatial tool and linking tools presented to BVIG by March 2023		The documentation to support the ES-CV tool is now complete.	
<b>Output 5.</b> Stakeholder engagement to understand: (i) the required format for the ES-CV tool to ensure its compatible with existing management measures; (ii) presence and intensity of human pressures; (iii) distribution of key habitats and the availability of information for estimating sensitivity; and (iv) the training requirements needed to maximise stakeholder use of the ES-CV tool.	<p>5.1 Generation of format specification for the ES-CV tool with representatives from the MNRL&amp;I by October 2021</p> <p>5.2 Presence of a definitive list of human activities occurring in BVI waters by September 2021</p> <p>5.3 Spatial data on the distribution of marine habitats collated by Dec 2021</p> <p>5.4 Delivery of training to support the use and maintenance of the ES-CV tool in the BVI by March 2023</p> <p>5.5 Gender mix (50:50) input into the consultation process across the life of the project by January 2023</p>	<p>Much of this output is now complete. The Ministry provided the required structure for the ES-CV tool early on in the project i.e. by specifying that the ES-CV tool needed to be closely aligned to the terrestrial tool (also produced by Wood Plc). Importantly, DPlus150 undertook additional work not specified in the proposal document. It was apparent that the spatial data concerning the distribution of human activities in the marine environment of the BVI was not present. As such, NOC generated proxies for all of the main human activities in the waters of the BVI. This 'geo-database' has been passed onto Wood Plc for inclusion in the ES-CV tool.</p>	
Activity 5.1 Generation of format specification for the ES-CV tool with representatives from the MNRL&I by October 2021		Complete	
Activity 5.2 Presence of a definitive list of human activities occurring in BVI waters by September 2021		Complete	

Project summary	SMART Indicators	Progress and Achievements April 2022 - March 2023	Actions required/planned for next period
Activity 5.3 Spatial data on the distribution of marine habitats collated by Dec 2021		Complete	
Activity 5.4 Delivery of training to support the use and maintenance of the ES-CV tool in the BVI by March 2023		To be completed	Delivery planned w/c 5 <sup>th</sup> June
Activity 5.5 Gender mix (50:50) input into the consultation process across the life of the project by January 2023		Met	

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

Project Summary	Measurable Indicators	Means of Verification	Important Assumptions
<p><b>Impact: Improved protection of marine living resources and sustainable management of human activities; the promotion of the Blue Economy; and improved transparency and understanding of marine management processes.</b></p> <p>(Max 30 words)</p>			
<p><b>Outcome:</b></p> <p>Step-change in the level sophistication and capability of marine management in the BVI along with an ability to integrate climate vulnerability and facilitation of MSP</p>	<p>0.1 Adoption of the ES-CV tool with the workflow generating marine management advice and actions by January 2023. Provision of direct training and practical demonstration of ES-CV tool by BVI stakeholders on national projects/case study problems. Following training, stakeholders will be expected to be able to demonstrate how</p>	<p>0.1 Testimonials on the value and capability of the ES-CV tools provided by: (i) Ministry of Natural Resources, Labour and Immigration; (ii) BVI Department of Disaster Management; and (iii) the National Parks Trust of the Virgin Islands. Practical demonstration of ES-CV tool by at least 15 BVI Government employees of varying grades and responsibilities (across multiple departments). BVI stakeholders will demonstrate the tool without direct</p>	<p>That resulting management practices, based on the assessments provided by the ES-CV spatial planning tool, are adopted</p> <p>BVI Government and stakeholders maintain commitment to the project</p> <p>BVIG have mechanisms in place to implement the management</p>

	<p>they use and can apply the tool to solve real world problems.</p> <p>0.2 Identification and adoption of the ES-CV as the primary method for supporting marine spatial planning in the BVI by February 2023.</p> <p>0.3 Ability to conduct spatial analyses across the land/sea boundary that support Marine Spatial Planning and analyses of coastal vulnerability by March 2023.</p> <p>0.4 Application of ES-CV on at least 5 different national projects or case study problems during the project or within at least 1 year of project completion.</p> <p>0.5 Expectation that the tool will be maintained and modified by the BVI stakeholders following its deployment and project completion.</p>	<p>supervision of project team, feedback forms collected following training.</p> <p>0.2 Presence of MNRL&amp;I pathway document stating the forward plan for using the ES-CV tool and producing MSPs of the BVI</p> <p>0.3 Report case study examining the marine management capability before and after the development of the ES-CV spatial planning tool</p> <p>0.4 Assessment studies and/or related outputs using the ES-CV tool reference in project documentation and/or BVI national policy. Example case studies can be developed if national projects are delayed due to COVID-19 and related impacts.</p> <p>0.5 Audit trail or record of subsequent refinements of the tool made by BVI stakeholders without the involvement of the project team. New tool versions developed after project completion. Demonstrated capacity building shown by limited or no further engagement with project team after completion of project.</p>	<p>practices derived from the use of the ES-CV tool</p> <p>BVIG Departments have ability to work cooperatively across land sea boundaries</p> <p>National projects requiring the ES-CV tool are not delayed further due to COVID-19 and related impacts.</p>
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<p><b>Output 1</b></p> <p>Pressures/ Activities Matrix developed for BVI</p>	<p>1.1 Pressures/ Activities matrix developed for BVI consultation by end Sept 21</p> <p>1.2 Pressures/ Activities review workshop by end of Nov 21</p> <p>1.3 Presence of a definitive list of human activities occurring in BVI waters by September 2021</p> <p>1.4 Pressures/ Activities matrix finalised and associated methodologies reported by Jan 22</p>	<p>1.1 Pressure/ Activities document circulated to stakeholders and feedback received with a short report detailing the consultation phase</p> <p>1.2 Workshop attendees list and meeting report</p> <p>1.3 Stakeholder reviewed and agreed pressures/ activities matrix and methodologies produced and circulated to workshop attendees</p> <p>1.4 Report accompanying the finalised pressure/activity matrix</p>	<p>BVI Government remain engaged and supportive of the project</p> <p>Absence of natural hazards and disasters allow workshop to take place</p>
<p><b>Output 2</b></p> <p>Sensitivity Assessment for Marine and Coastal habitats in BVI</p>	<p>2.1 Sensitivity assessment method agreed by Nov 21</p> <p>2.2 Sensitivity scores for BVI marine habitats compiled with associated evidence base by July 22</p> <p>2.3 Stakeholder consultation to agree final sensitivity outputs by Sept 22</p> <p>2.4 Pressures/ activities and sensitivity assessment for BVI Report finalised by October 22</p>	<p>2.1 Minutes of workshop circulated to stakeholders</p> <p>2.2 Draft report of evidence base and sensitivity scores circulated to stakeholders</p> <p>2.3 Sensitivity outputs used in model in WP2</p> <p>2.4 Published report, available on JNCC website and BVI</p>	<p>There is data and information on habitat sensitivities is openly available</p>

<p><b>Output 3</b></p> <p>Review available cumulative impact assessment methods and assess feasibility for use in the BVI</p>	<p>3.1 Review and testing of cumulative impacts assessments suitable for BVI – report by Nov 2022</p> <p>3.2 Stakeholder consultation on differing cumulative impacts assessments Dec 2022</p> <p>3.3 Revise suitability report with stakeholder consultation by Jan 2023</p>	<p>3.1 Draft report on the available of cumulative impacts assessment methods suitable for use in the BVI</p> <p>3.2 Minutes of stakeholder consultation on the suitable cumulative impacts assessment methods</p> <p>3.3 Draft report finalised with the finds on the consolation</p>	<p>No hinderances identified</p>
<p><b>Output 4</b></p> <p>Translation and integration of existing marine management tools into the ES-CV tool (activity to pressures matrices; sensitivity matrices; and options for considering cumulative impacts).</p>	<p>4.1 Generation of format specification for the ES-CV tool with representatives from the MNRL&amp;I by October 2021</p> <p>4.2 Presence of two tools encoded in the ES-CV tool by Jan 2023</p> <p>4.3 Incorporation of spatial data on the distribution of marine habitats collated by Dec 2022</p> <p>4.4 Hosting of the ES-CV tool on the National GIS system within the Government of the BVI by March 2023</p> <p>4.4 Recommendations on the use and maintenance of spatial tool and linking tools presented to BVIG by March 2023</p>	<p>4.1 Presence of a ES-CV specification document agreed with MNRL&amp;I.</p> <p>4.2 Presence of the two tools with the ES-CV tool and a report with diagrams detailing the modifications made to the HCVA to produce the ES-CV spatial planning tool</p> <p>4.3 Report section detailing the spatial data selected and imported into the ES-CV tool.</p> <p>4.4 Confirmation report that the ES-CV has been integrated with the National GIS infrastructure (provided by Town and Country Planning Department, BVI). Testimonial from the MNRL&amp;I that the marine-terrestrial ES-CV spatial planning tool has been made</p>	<p>Existing data sources have the required resolution, format and availability to: (i) identify and locate human activities; and (ii) describe and delineate the main marine habitats or resource present within the planning region</p>



		<p>available through the National GIS system and plans for its further integration into the decision-making infrastructure</p> <p>4.5 Production of a user guide for the ES-CV and a report section providing recommendations for the continued use of the tool.</p>	
<p><b>Output 5</b></p> <p>Stakeholder engagement to understand: (i) the required format for the ES-CV tool to ensure its compatible with existing management measures; (ii) presence and intensity of human pressures; (iii) distribution of key habitats and the availability of information for estimating sensitivity; and (iv) the training requirements needed to maximise stakeholder use of the ES-CV tool.</p>	<p>5.1 Delivery of training to support the use and maintenance of the ES-CV tool in the BVI by March 2023</p> <p>5.2 Gender mix (50:50) input into the consultation process across the life of the project by January 2023</p>	<p>5.1 Report detailing the ES-CV training events along with a participants list.</p> <p>5.2 Repeat surveys (start and end of project) to assess stakeholder awareness of the value of biodiversity and the impacts of different land management practices</p> <p>5.2b Disaggregated gender outputs from the consultation process and meeting records</p>	<p>Good working relationships are created and maintained between SHG/project partners and stakeholders.</p> <p>Integration of WP components into the ESCV is not dependent on any one WP component, i.e. issues with one WP will not jeopardise the integration of other completed components.</p>
<p><b>Activities:</b></p> <p>1.1 List the human activities within the marine environment or directly influencing the marine environment.</p> <p>1.2 Undertake literature review on sensitivity of BVI's marine and coastal habitats to pressures, following agreed assessment method.</p> <p>2.1 Collate existing information and classifications for BVI marine environment.</p> <p>2.2 Develop a sensitivity assessment method based on available information, using MarESA as a framework.</p> <p>2.3 At the workshop held in WP2, agree the sensitivity assessment method with local stakeholders. #</p>			

- 2.4 Consult with in-country experts to sense check outputs (in country meeting).
- 3.1 Review and assess the feasibility of incorporating a cumulative impact assessment method within the ESCV framework and tool.
- 4.1 Integrate the activity/pressure (WP1), sensitivity matrix (WP2) and cumulative impacts method, if possible, into the ESCV framework.
- 4.2 Produce ESCV tools for stakeholders.
- 5.1 Deliver training on the ESCV tool to all stakeholders.

## Annex 3 Standard Indicators

**Table 1 Project Standard Indicators**

DPLUS Indicator number	Name of indicator using original wording	Name of Indicator after adjusting wording to align with DPLUS Standard Indicators	Units	Disaggregation	Year 1 Total	Year 2 Total	Year 3 Total	Total to date	Total planned during the project

**Table 2 Publications**

Title	Type (e.g. journals, manual, CDs)	Detail (authors, year)	Gender of Lead Author	Nationality of Lead Author	Publishers (name, city)	Available from (e.g. weblink or publisher if not available online)

## Checklist for submission

	Check
<b>Is the report less than 10MB?</b> If so, please email to <a href="mailto:BCF-Reports@niras.com">BCF-Reports@niras.com</a> putting the project number in the Subject line.	
<b>Is your report more than 10MB?</b> If so, please discuss with <a href="mailto:BCF-Reports@niras.com">BCF-Reports@niras.com</a> about the best way to deliver the report, putting the project number in the Subject line.	
If you are submitting photos for publicity purposes, <b>do these meet the outlined requirements (see section 10)?</b>	
<b>Have you included means of verification?</b> You should not submit every project document, but the main outputs and a selection of the others would strengthen the report.	
<b>Do you have hard copies of material you need to submit with the report?</b> If so, please make this clear in the covering email and ensure all material is marked with the project number. However, we would expect that most material will now be electronic.	
If you are submitting photos for publicity purposes, do these meet the outlined requirements (see section 13)?	
Have you involved your partners in preparation of the report and named the main contributors	
Have you completed the Project Expenditure table fully?	
Do not include claim forms or other communications with this report.	