**ADDENDUM TO BUSINESS CASE INCLUDING FOR BRIDGE FUNDING AND SCALE-UP COST EXTENSIONS**

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| **SUMMARY INFORMATION** |  |
| Project Name | **UK Blue Carbon Fund**  |
| Country or region targeted |  |
| Type of cost extension (if applicable) | **Cost extension** |
| Original project budget |  |
| Original project start and end dates |  |
| Cost extension value (if applicable) | **£200,000** |
| New project end date (if applicable) |  |
| Business Case Quest Document No. |  |

| **INFORMATION** |
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| **What is the project’s purpose?** |
| Defra’s UK Blue Carbon Fund Programme aims to produce a transformational change in the conservation of mangroves by developing and embedding operational blue carbon markets across Latin America and the Caribbean that provide local communities with a sustainable income and assist in moving low-income countries towards low-emission, climate-resilient development. The program will mobilise strategic public and private sector investments in the blue carbon sector, funding projects in sectors such as sustainable aquaculture, coastal zone management and eco-tourism that target the main drivers of mangrove degradation and barriers to mangrove conservation. This will ensure the sustainable management of mangrove forests and accelerate sustainable development in key mangrove-focused countries in Latin America and the Caribbean.  |
| **What is the objective of the cost extension or other changes?** |
| This cost extension will help to build our understanding of interventions that are effective in protecting and enhancing biodiversity, and improve our understanding of extreme situations such as ecosystems tipping into new regimes. This work is complementary to the objectives of the Blue Carbon Fund; it will help us to better understand the value of nature, including mangroves, on biodiversity. The work will provide important evidence that will inform design of future Defra ODA programmes similar to this one, and will also directly inform the independent Review on the Economics of Biodiversity, led by Professor Sir Partha Dasgupta, commissioned by HM Treasury in spring 2019. *Background*The UK’s 25 Year Environment Plan sets out that we will leave our environment in a better state than we found it, and that the UK is committed to being a global leader on halting biodiversity loss internationally. Under the Plan we commit to developing an ambitious new post-2020 global framework under the UN Convention on Biological Diversity, which will deliver transformational change and support countries in halting biodiversity loss.Biodiversity loss and ecosystem collapse is among the top global risks to society, and the planet is facing its sixth mass extinction. Almost one million animal and plant species are at risk of extinction. Land degradation has reduced the productivity of 23% of the global land surface, between US$235-577 billion in annual global crops are at risk from pollinator loss and 100-300 million people are at increased risk of floods and hurricanes because of loss of coastal habitats and protection[[1]](#footnote-1). According to the IUCN more than one in six mangrove species are now in danger of extinction and 40% of species are considered threatened[[2]](#footnote-2).The loss of biodiversity severely undermines our ability to achieve several of the Sustainable Development Goals. While much of the human population depends on natural capital to meet its livelihood needs, the poorest depend disproportionately on biodiversity for their subsistence needs, both in terms of income and insurance against risk[[3]](#footnote-3). Biodiversity protection is fundamental to achieving poverty reduction, food and water security, and economic sustainability. Biodiversity and nature more broadly are part of the solution in simultaneously delivering against a number of international and UK policy objectives, including the UK’s net zero target by 2050, SDGs, what will be agreed as the post-2020 framework in the CBD COP15, the Paris climate targets, and the Sendai framework on Disaster Risk Reduction. For example, experts predict that “Nature Based Solutions” could deliver 37% of cost-effective CO2 mitigation by 2030[[4]](#footnote-4), helping to meet biodiversity, climate change and disaster risk reduction targets, and indirectly contributing to additional SDGs.An independent review on the Economics of Biodiversity was commissioned by HM Treasury in spring 2019 and is being led by Sir Professor Partha Dasgupta. The Review is global in scope and its aims are to assess the economic value of biodiversity, to assess the economic costs and risks of biodiversity loss and to identify actions that will simultaneously enhance biodiversity and deliver economic prosperity. The Review will report ahead of the CBD COP15 in Kunming, China, in October 2020. The primary audiences for the review are economic and finance policy and decision makers, both public and private.The Inter-American Development Bank (IDB) has a wealth of experience in the areas of biodiversity, ecosystem services and natural resources, examples of their work in this space include (but are not limited to):* The Biodiversity and Ecosystems Services (BES) Programme that aimed to mainstream the value of biodiversity and ecosystem services into key economic sectors, invest in conservation, strengthen environmental governance, and promote private sector innovation in environmental protection.
* The Natural Capital Lab which aims to drive innovation in finance for biodiversity, ecosystems and conservation and test new blended public-private solutions: <https://www.iadb.org/en/environment/natural-capital-lab>
* Development and use of an ‘integrated economic-environmental modelling’ (IEEM) framework that aims to integrate environmental and economic impact analysis to help decision makers more accurately analyse the current and potential impacts of a policy or investment decision on both economic and environmental indicators.

This cost extension complements, but is separate to, the aims of the Blue Carbon Fund; it does not extend the scope of the Blue Carbon programme. The project will increase our understanding of what works and why, in relation to reducing biodiversity loss and environmental degradation, with a particular reference to mangroves.This work will inform future ODA spend but also directly contribute to the Economics of Biodiversity Review’s evidence base and inform the Review’s recommendations by:1. Improving our understanding about what works well in terms of mainstreaming natural capital and biodiversity considerations into development and infrastructure planning.
2. Developing an understanding of state-of-the-art financial innovations that help to reduce biodiversity loss.
3. Better understanding the consequences of ecosystems tipping into new regimes on ecosystem functions and on local economies.

The UK is well placed to commission this work which will contribute to UK leadership on environment and climate change, the Dasgupta Economics of Biodiversity Review, the UK’s presidency of the UNFCCC COP26 in 2020, achieving net zero emissions by 2050, doubling UK International Climate Finance to £11.6bn between 2021/22-2025/26 and wider greening of ODA.  |
| **What is the additional and total support the UK will provide?**  |
| The UK will provide an additional £200,000 in financial support to carry out this work, bringing the total financial support to the Blue Carbon Fund Programme to £12,950,000 |
| **What are the expected results?** |
| 1. Generate understanding about mainstreaming natural capital and biodiversity considerations into development and infrastructure planning, including:
	1. Develop a report synthesising examples of initiatives that mainstream natural capital and biodiversity into development planning, drawing out key lessons, challenges and successes. Examples including mangroves and/or coastal protection will be considered in the analysis.
	2. Production of three case studies that explore in detail examples of how natural capital and biodiversity have been mainstreamed into development planning. The topics or cases should be agreed between IDB, Defra and the Review Team, but could focus on mangroves/ coastal protection, extractives, sustainable cities, development planning in the Bahamas, and infrastructure standards.
2. Developing an understanding of state-of-the-art financial innovations that help to reduce biodiversity loss.
	1. Develop a report on state-of the art financial innovations in the sector, that may be underway or untested, but that are introducing new financial models into either national budgeting and programming, private investment, or public-private partnerships.
	2. Produce case studies for three IDB projects that have demonstrated innovative finance models that have worked, delving into the detail of how and why they have worked, and any lessons that may apply for application elsewhere or / and scaling up. The particular green financing examples should be agreed between IDB, Defra and the Review Team, but could include insurance schemes, habitat banks, and large-scale multi-stakeholder funds. At least one example will be about mangroves and/or coastal protection.
3. Through the Integrated Economic-Environmental Modelling (IEEM) Platform, fill an important gap in the economic development literature and practitioner’s toolbox.

At the core of IEEM is a future-looking global trade model (computable general equilibrium) that enables the analysis of the impact of public policy and investment on economic indicators such as Gross Domestic Product (GDP), income and employment, but also on wealth and natural capital, all in a quantitative, comprehensive and consistent framework. IEEM generates indicators that enable decision-makers to quantitatively assess strategies to achieve complex policy goals including the Sustainable Development Goals, national green growth targets and decarbonization plans. IEEM’s value-added over a conventional economy-wide modelling framework include: (i) integrating environmental data (from the System of Environmental-Economic Accounting Central Framework) with economic data to enable analysis of the links between the environment and the economy; (ii) IEEM’s environmental modelling modules that capture the specific dynamics of each natural capital asset; (iii) IEEM indicators that reflect impacts on the three dimensions of sustainable development, namely the economy, society and the environment, and; (iv) IEEM’s linkage with geospatial ecosystem services modelling which demonstrates policy impacts on a broad range of ecosystem services values, including regulating and non-market ecosystem services, in a spatially explicit way. Results under this component include: * 1. A paper assessing the economic, natural capital and ecosystem service impacts of tipping points in the Amazon biome. This may focus on climate change’s potential impact on increasing the frequency and intensity of drought and the savannization of some regions of the Amazon; the final scenarios to be implemented will be agreed upon between IDB, HMT and Defra. To do so, analysis will be conducted for the most economically important countries of the Amazon biome for which reliable economic data exists, namely: Bolivia, Brazil, Colombia and Ecuador.

Three country case studies that examine feedback between economic and ecological systems in a quantitative way. The focus of case studies will be agreed between IDB, Defra and HMT, but may include economic, natural capital and ecosystem service impacts of Costa Rica’s Decarbonization Plan, and a proposal to expand Colombia’s Payment for Ecosystem Services Programme * 1. A report demonstrating how natural capital accounts can be integrated into economy-wide analytical frameworks such as IEEM to enhance evidence-based decision-making by integrating natural capital values.
1. The IDB technical team will explain and disseminate the results to relevant UK HMG teams, including within Defra and the HMT Economics of Biodiversity Review Team, during one or more technical missions. The UK Blue Carbon Fund team in Defra will have the opportunity to learn from the work and ask questions of the IDB team. The exact timing of the mission(s) is to be agreed between HMT, Defra and IDB, but is likely to be in between March and May 2020.
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| **What is the approach to implementation?** |
| *Management and Governance Arrangements*Following the approval of the business case extension proposal, the IDB will prepare a project proposal document setting out the aim and objectives of the project. Defra will be allowed 10 days to approve this, as set out in Section 5 of the Blue Carbon Fund’s admin agreement. Once the project proposal document has been approved, both parties (Defra and the IDB) will sign an amendment to the disbursement schedule.As with the existing UK Blue Carbon Fund project, the IDB will be responsible for the day to day management of the work. The same IDB team who lead UKBCF will be responsible for overall management of all three parts of the work, liaising with the team leading on implementing the third task (IEEM). A member of Defra’s International Strategy analytical team will take an oversight role, through inclusion on a steering group for the work and regular contact with HMT. HMT’s Dasgupta Review Team will play a leading role to ensure the outcomes are of value to the Review, through regular contact with the relevant IDB and Defra teams.IDB will also provide additional content for the Project’s Annual Review for the work set out in this Cost Extension business case. This will be scored against additional indicators in the project’s log frame, which will need to be amended to reflect this change. These indicators are: 5.1: Case studies delivered to time and budget5.2: Modelling work delivered to time and budget Gender Equality *–* The IDB applies a set of environmental and social safeguard policies and guidelines to projects they finance to help protect against environmental and social harm and to enable borrowers to meet best international practices. The safeguards and policies focus on; Environment, Natural Disaster Risk Management, Involuntary Resettlement, Indigenous Peoples and Gender Equality (DFID CAA, 2016). **Financial case**The contract will take the form of a direct grant. Overall, Defra will invest £200,000 into this project. £150,000 will be paid to the IDB before the end of March 2019, using unutilised ODA (RDEL) from the 2019/20 financial year. £50,000 of ODA is needed in the 2020/21 financial year. This need was presented to the ODA Board in February, and they agreed, in principle and pending confirmation of 2020/21 budgets, that £50,000 of unutilised ODA from the 2020/21 financial year could be utilised for this project.. As the project is primarily around research and analysis, the project requires Resource Departmental Expenditure Limit (RDEL) funding.. The IDB will use the first instalment to produce a report setting out preliminary results, and a 15-20 page paper summarising lessons learned from previous initiatives that have looked to mainstream natural capital and biodiversity in development planning. These outputs will be delivered by the end of March 2020. Approximately three quarters of the work will be delivered in the 19/20 financial year, with the second instalment, of £50,000, being used to produce further analysis, and finalise the report. There is a low risk that the IDB are not able to deliver three quarters of the work in the current financial year, and therefore that some of the work will need to be accounted for in the 2021/22 financial year. Additional funding from the 2021/22 financial year, e.g. additional unutilised ODA, could be called upon if required. The IDB and HMT have provided assurances that the bulk of the work will be completed this financial year. Further, as this work will feed into a larger piece, led by HMT, the deadlines are largely non-negotiable, and the work must be completed on time. Moreover, there is a risk that the IDB do not deliver the work to the standard expected. This work will be covered by the existing UK Blue Carbon Fund admin agreement, which states that Defra is able to clawback uncommitted funds. Managing public money states that payments should not be made in advance of need. In this case, the IDB require the first payment of £150,000 up front, in order to be able to sign a contract with the consultant; they need to have funding in their account to show that they will have liquidity to cover the expected payments. (This is a short project, with final outputs expected by May 2020.) We have discussed with the Financial Regularity team, and had approval to make this payment in advance. The IDB usually require payment in advance in order to demonstrate to their Board that they have the liquidity to undertake a project, and get the Board’s approval. Defra have already deposited £1,912,144 in the donor balance account for a separate project. Delays in getting this separate project approved have meant that this money has not yet been committed by the IDB, and so the IDB are using £50,000 of this to allow them to form contracts with the consultants needed for the Dasgupta review work. The delays in approving the other project are now almost resolved, and so the IDB Board are set to approve this project in the next few weeks. The IDB therefore require a payment of £50,000 in the 2021/22 financial year, in order to enable them to approve that project. The Financial Regularity team have also agreed that this payment can be made in advance. |
| **Describe any key changes to the original business case including the theory of change or new evidence from ongoing monitoring, evaluation or learning work?** |
| **Economic appraisal and cost benefit analysis**The economic appraisal and cost benefit analysis for the original business case concluded that the project activities would lead to the conservation of 5,570 ha of mangrove, with resulting benefits in terms of carbon stored and coastal protection. This would result in £11.5 of benefits for every £1 in cost. By improving the underlying evidence base for this and other interventions aimed at conserving biodiversity rich habitats, this cost extension is expected to maintain or enhance this ratio of benefits to costs. Given the size of the additional investment and the nature of the activities, it is not possible to quantify this improvement, but it is expected to exceed the £200,000 investment cost plus HMT and Defra staff time totalling [0.5 FTE- 0.3 HMT and 0.2 Defra] given the potential to drive additional global action to conserve biodiversity. **Monitoring and Evaluation**The additional monitoring for this extension will be two indicators in the project log frame assessing whether the work was delivered to cost and budget. This work should also be assessed, including any synergies with the existing programme, in the independent evaluation(s) of the programme. |

1. IPBES (2019) The global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES): <https://www.ipbes.net/global-assessment-report-biodiversity-ecosystem-services> [↑](#footnote-ref-1)
2. https://www.iucn.org/content/mangrove-forests-worldwide-decline [↑](#footnote-ref-2)
3. Linking biodiversity Conservation and Poverty Alleviation: A State of Knowledge Review, Secretariat of the Convention on Biological Diversity <https://www.cbd.int/doc/publications/cbd-ts-55-en.pdf> [↑](#footnote-ref-3)
4. The Nature Conservancy’s study on Natural Climate Solutions (Oct 2017): <https://www.pnas.org/content/114/44/11645> [↑](#footnote-ref-4)