



Department
for Environment
Food & Rural Affairs

COVER SHEET

<p>PROGRAMME SUMMARY</p>	<p><i>This is a programme within the Blue Planet Fund that aims to maximise the global leveraging power of the World Bank. PROBLUE’s ambition is for the blue economy to act as a key driver of growth in small island developing states (SIDS) and coastal least developed countries (LDCs). The programme’s overarching goal is to achieve integrated and sustainable economic development in healthy oceans by working across four complementary pillars:</i></p> <ul style="list-style-type: none"> - <i>Sustainable fisheries and aquaculture</i> - <i>Marine pollution</i> - <i>Oceanic sectors (blueing shipping and ports, and other sectors such as offshore wind and desalination)</i> - <i>Seascape management (strengthening integrated and sustainable management of coastal and marine areas, focusing on nature-based solutions, blue carbon and building government capacity to finance the blue economy)</i> <p><i>Cross-cutting issues such as poverty, livelihoods, gender, climate change and maximising finance for development, are interwoven throughout the programme.</i></p>
<p>COUNTRY / REGION</p>	<p><i>SIDS and LDCs</i></p>
<p>PROGRAMME VALUE</p>	<p><i>Up to £25m</i></p>
<p>START DATE</p>	<p><i>October 2021</i></p>
<p>END DATE</p>	<p><i>March 2026</i></p>
<p>OVERALL RISK RATING</p>	<p><i>Medium (Amber)</i></p>

CONTENTS

GLOSSARY	5
1. INTERVENTION SUMMARY	7
1.1 What support will the UK provide?	7
1.2 Summary of programme and its objectives	7
1.3 Why is UK support required and why now?	9
1.4 What are the main project activities?	10
1.5 Strategic alignment	11
1.6 What are the expected results?	12
1.7 Risks	13
2. STRATEGIC CASE	14
2.1 CONTEXT AND NEED FOR A UK INTERVENTION INCLUDING MARKET, GOVERNANCE AND INFORMATION FAILURES	14
2.1.1 Global context	14
2.1.2 Blue finance: what is it?	15
2.1.3 Blue finance: key barriers	15
2.1.4 Opportunities for intervention	17
2.1.5 Why problue?	17
2.1.6 Theory of change	20
2.1.7 Expected impact, outcomes and activities	21
2.1.8 Conclusion	24
2.2 WHAT SUPPORT WILL THE UK PROVIDE?	25
2.2.1 UK investment	25
2.3 HOW WILL THIS PROGRAMME CONTRIBUTE TO DEFRA AND OTHER POLICY OBJECTIVES?	25
2.3.1 Climate change and biodiversity	25
2.3.2 Finance	27
2.2.3 International climate finance	27
2.4 Risks	28
3. APPRAISAL CASE	28
3.1 Appraisal Approach	28
3.2 Long list options	29
3.2.4 Option 3: Sustainable Blue Economy Finance Initiative (SBEFI)	30
3.2.5 Option 4: Blue Natural Capital financing facility (BNCFF)	30
3.3 Long list summary conclusions	31
3.4 Appraisal Approach – Short list of options	31
3.5 Appraisal of shortlisted options	32

3.6 Value for money appraisal.....	33
3.6.1 Option A - Do Minimum: Fund £3.1m for one year in pillar 2	33
3.6.2 Option B - Invest £6m in year one across the four pillars, with up to £25M across the four pillars over 5 years.....	36
3.6.3 Option C – Invest over £10m each year across the four pillars, with further investments of £10m each 5 years.....	40
3.7 Added value Leverage	42
3.8 Mechanisms to ensure VfM.....	43
3.9 Conclusion and preferred option	43
3.9.1 Option A: A one-year investment of £3.1m, to fund projects under Pillar two (marine pollution)	43
3.9.2 Option B: A 5- year investment of £25m to fund projects across all four Pillars PROBLUE (initial year 1 investment of £6m and funding for following years conditional on delivery)	44
3.9.3 Option C: A five-year investment of up to £50m to fund across all four Pillars, with an initial year 1 investment of Invest over £10m.....	44
3.9.4 Conclusion	45
4. Commercial Case.....	46
4.1 Commercial approach	46
4.2 Ensuring value for money through procurement.....	47
4.3 Governance & Financial management	48
4.6 State aid.....	48
4.7 Commercial risks.....	49
5. Financial Case	49
5.1 Nature and value of the expected costs	49
5.1.1 nature and value	49
5.1.2 PROBLUE budgets	49
5.2 Accounting Officer Tests	50
5.3 Schedule of funding / costs (i.e. high-level budget)	51
5.3.1 payment schedule	51
5.3.2 HMG Front-line delivery costs	51
5.3.3 Administrative costs	51
5.4 Financial Accounting Considerations for Defra.....	51
5.5 Monitoring, reporting and accounting for expenditure.....	52
5.5.1 monitoring, reporting and accounting	52
5.5.2 payment in advance of need	52
5.6 Financial management.....	52
5.7 Financial and fraud risk assessment	52
5.8 Provisions for DEFRA to withdraw funding	53

HMT approval	53
6. MANAGEMENT CASE.....	53
6.1 management and governance arrangements	53
6.1.1 Roles, responsibilities and accountabilities: Defra	54
6.1.2 Roles, responsibilities and accountabilities: world bank.....	55
6.2 Monitoring, Evaluation and Learning.....	56
6.2.1 monitoring, evaluation and learning.....	56
6.2.2 REPORTING.....	56
6.3 What are the key risks and how will they be managed?	58
6.4 Avoiding fraud and corruption	61
6.5 TRANSPARENCY.....	61
6.6 Safeguarding, gender and equality.....	61
6.6.1 Safeguarding.....	61
6.6.2 Gender and equality	62
Annex A: Blue Planet Fund background.....	64
Annex B: PROBLUE pillars (detailed)	65
Pillar 1: Fisheries and aquaculture	65
Pillar 2: Preventing and managing marine pollution.....	66
Pillar 3: Oceanic sectors	67
Pillar 4: Integrated seascape management	68
Annex C: Full list of pillar Activities and outcomes.....	70
Annex D: Options assessment	74
Annex E: Economic Analysis.....	76
ANNEX F: PROBLUE thematic priorities across regions.....	81

GLOSSARY

ALDFG	Abandoned, Lost and Discarded Fishing Gear
AFR	Africa
ASEAN	Association of South East Asian Nations
BEIS	Department of Business, Energy and Industrial Strategy
BNCF	Blue Natural Capital Financing Facility
BPF	Blue Planet Fund
CBD	Convention on Biological Diversity
CSIR	Council for Scientific and Industrial Research (CSIR)
COP26	UN Climate Change Conference of the Parties
EAP	East Asia and the Pacific
ECA	Europe and Central Asia
EPR	Extended Producer Responsibility
FAO	Food and Agriculture Organisation
FCDO	Foreign, Commonwealth and Development Office
FY	Financial Year
GEF	Global Environment Facility
GHG	Green House Gas
GIS	Geographic Information System
GNI	Gross National Income
GOA	Global Ocean Alliance
HLP	High Level Panel for a Sustainable Ocean Economy
IBRD	International Bank for Reconstruction and Development
ICF	International Climate Finance
IDA	International Development Association
IFC	International Finance Corporation
IMO	International Maritime Organisation
IUU	Illegal, Unreported and Unregulated fishing
KPI	Key Performance Indicator
LAC	Latin America and the Caribbean
LDC	Least Developed Country
MDB	Multilateral Development Bank
MENA	Middle East and Northern Africa
MPA	Marine Protected Area
MSP	Marine Spatial Planning
NbS	Nature-based Solutions
NDC	Nationally Determined Contribution
OCP	Ocean Country Partnership Programme
ODA	Official Development Assistance
ORRAA	Ocean Risk and Resilience Action Alliance
PC	Partnership Council
SAR	South Asia
SBEFI	Sustainable Blue Economy Finance Initiative
SDG	Sustainable Development Goal

SEAH	Sexual Exploitation, Abuse, and Sexual Harassment
SIDS	Small Island Developing States
SR	Spending Review
ToC	Theory of Change
UKDEL	UK Delegation
UN	United Nations
UNFCCC	United Nations Framework Convention on Climate Change
US	United States
VFM	Value for Money
WASH	Water, Sanitation and Hygiene
WBG	World Bank Group

1. INTERVENTION SUMMARY

1.1 WHAT SUPPORT WILL THE UK PROVIDE?

The UK will provide up to £25m of Official Development Assistance (ODA) from the Blue Planet Fund (BPF¹) into the World Bank's PROBLUE programme over five years. The funding will support activities under four pillars (fisheries and aquaculture, preventing and managing marine pollution, oceanic sectors, and integrated seascape management). The first year of investment will be £6m (financial year [FY] 2021/22). Potential future investments will be £4.75m per year (FY22/23 – 25/26). Initial investment is greater in the first year than subsequent years as this is PROBLUE's first year of delivery on the ground, and so investment is required to establish programming and pipelines. As such, we expect operational costs to be higher in year one than in subsequent years. Any potential future funding will be dependent on performance and meeting key milestones, as well as securing funding in future Spending Reviews (SR). The UK may also wish to increase its funding in future years, depending on performance and results.

UK funding will be invested as a contribution in Pound Sterling (£). UK investments are then combined with other donor funding, including investments from Australia, Canada, Denmark, the European Commission, France, Germany, Iceland, Ireland, Norway, Sweden and the United States (US). The UK's contribution will form ~20% of PROBLUE's annual budget for this financial year, with the prospect of maintaining a significant level of contribution over the subsequent four years. The UK will also aim to assume the co-Chair position of PROBLUE's decision-making body, the Partnership Council. The UK would therefore have significant influence – and visibility – in directing the overall direction of the programme to meet UK objectives, as well as the influence necessary to ensure that UK funding delivers value for money (VfM; see section *UK strategic advantage*, page 17). The overall PROBLUE budget will be used to leverage private sector investment across the four programmatic pillars and across the wider World Bank Group (WBG) portfolio.

1.2 SUMMARY OF PROGRAMME AND ITS OBJECTIVES

PROBLUE is the World Bank's leading multilateral mechanism for leveraging and disbursing blue finance towards sustainable ocean sectors and activities. It is a multi-donor trust fund that supports the achievement of Sustainable Development Goal (SDG) 14, *Life Below Water*, and the Bank's twin goals of *ending extreme poverty and boosting shared prosperity*. PROBLUE aims to do this by reducing the existing blue finance gap by creating the necessary enabling environment for the public and private sectors to shift from unsustainable to sustainable activities.

Current blue finance investments fall well below what is needed to transition to a sustainable ocean economy. In the last 10 years, less than 1% (USD ~\$13 billion) of the total economic value of the ocean has been invested in sustainable projects through philanthropy and ODA², despite the fact that the ocean supports the livelihoods of one in ten people globally.³ PROBLUE is intentionally positioned to bring about this change. The financial services offered by PROBLUE are demand-led by recipient countries. It recognises that ocean-related activities vary in each country, depending on their unique national circumstances and the national vision adopted to reflect its own conception of a blue economy.

¹ See Annex B for background information on the BPF

² [Ocean Finance: Financing the Transition to a Sustainable Ocean Economy](#), High Level Panel for a Sustainable Ocean Economy (2020)

³ [Mapping global dependence on marine ecosystems](#), Selig et al, 2018, Conservation Letters 2019;12:e12617; UN (press release, 2017)

PROBLUE has four complementary pillars: fisheries and aquaculture, preventing and managing marine pollution, oceanic sectors and seascape management (summary below; see Annex B for detailed information on each pillar). Programming is focused on small island developing states (SIDS) and coastal least developed countries (LDCs).

Pillar 1: fisheries and aquaculture - improving fisheries management by addressing the underlying causes of overfishing and strengthening aquaculture sustainability. Work under this pillar aims to tackle key challenges within the sector and to help recipient countries make well-informed, evidence-based fisheries management decisions. PROBLUE also explores solutions for aquaculture on the issues of commercial viability, job creation and technology to enhance the contribution of aquaculture to a blue economy.

Pillar 2: preventing and managing marine pollution - addresses the threats posed to ocean health from marine pollution, including litter, plastics and land-based sources. PROBLUE provides financing to countries to support interventions at every stage of the plastic life cycle, from both the public and private angles. The programme also aims to address other sources of marine pollution, including from agriculture, fisheries (including abandoned, lost and discarded fishing gear; ALDFG), tourism and ports.

Pillar 3: oceanic sectors - “blueing” traditional and innovative oceanic sectors in ways that will limit their impacts on ocean health. PROBLUE’s initial efforts have so far targeted four main economic sectors:

- shipping, through development of blue ports and decarbonisation of the sector
- offshore wind energy development
- improving the sustainability of coastal tourism
- environmental aspects of desalination

Pillar 4: integrated seascape management – strengthening the integrated and sustainable management of coastal and marine areas. The Blue Economy Development Framework developed under PROBLUE provides a structure under which various policy analyses, capacity assessments, planning tools and financing instruments are organised to help countries design a contextualised blue economy roadmap and approach.

While activities are organised by pillar to enable effective monitoring and reporting, an important advantage of PROBLUE is that it works to make the rest of the World Bank’s investments more sustainable for the ocean; it “blues” the Bank’s wider portfolio. The scale and potential for change, therefore, is huge. Poverty, livelihoods, gender and climate change are cross-cutting themes and allow for deeper responses with greater impacts to the challenges facing the ocean. Although the pillars have been organised in a thematically distinct manner, they are approached in an integrated way. Pillar 4 is the organising pillar which drives this integration, predominantly through the use of common approaches and tools such as PROBLUE’s Blue Economy Development Framework, and Marine Protected Areas (MPAs), Integrated Coastal Zone Management and Marine Spatial Planning (MSP) more generally. **Targeted interventions in one pillar and/or sector are undertaken with the expectation of co-benefits in other pillars and sectors.** Focus is therefore placed on the number of PROBLUE activities that achieve results across multiple sectors, and that contribute to the broader goal of achieving integrated and sustainable development in the ocean economy. **This integrated approach to programming speaks directly to Ministerial steers that UK ODA should be strategically placed and coherent, and that activities should have multiple benefits.**

Over the past few years, PROBLUE has focused on undertaking the preparatory work create an enabling environment for blue finance⁴ to support countries' transitions toward a sustainable blue economy through tools, datasets, and policy approaches. **In short, through the initial donor funding,⁵ PROBLUE has started to build the enabling environment necessary for public and private finance to invest. From this financial year, investments will also support PROBLUE's transition from the preparatory work to delivery on the ground. USD ~\$15m has been earmarked from this year's budget to fund three pilot projects in Africa and Asia.** The first pilot will be cross-pillar, with a focus on fisheries; the second will focus on tourism and blue recovery; and the third will focus on mangroves and nature-based solutions (NbS).

1.3 WHY IS UK SUPPORT REQUIRED AND WHY NOW?

Before the COVID-19 pandemic, the global ocean economy was projected to continue to grow at twice the rate of the rest of the economy for the coming decade.⁶ The economic and social crises resulting from the pandemic has had severe impacts across ocean sectors. As countries try to recover from the economic shocks of the pandemic, there is an opportunity to support more sustainable choices, and identify new opportunities that will allow countries to grow and diversify their ocean economies.

As a world leader for international climate and nature finance, the UK is poised to apply its substantial expertise to the blue finance sphere. Investment into PROBLUE provides a rare opportunity for the UK to shape and influence a very nascent field. Sustainable blue finance is an emerging area of interest – donors who invest now will effectively establish the norms of the sector. They will shape how and what investments are made from the beginning, and direct processes and flows according to their own environmental priorities. The UK, therefore, will benefit from establishing a new field of sustainable finance based on domestic and international priorities whilst simultaneously embedding sustainable blue finance into long-term policy making. Both climate change and ocean health require a scaling up of financing for sustainable activities and redirection of investment away from unsustainable practices.

Through its investments into Multilateral Development Banks (MDB), the UK has successfully scaled up finance for climate change across sectors such as agriculture, forestry and supply chains, renewable energy and industrial production. Investment into PROBLUE would, in the long-term, aim to mirror the successes of climate finance on terrestrial ecosystems and bring them to the marine environment. As a starting point, the UK will use its influence to position marine issues at the heart of World Bank activities, in alignment with wider UK objectives on MDB reform and putting nature at the centre of investments. Defra, with the support of the Foreign, Commonwealth and Development Office (FCDO) and the UK delegation to the World Bank (UKDEL), would use this investment as an opportunity to implement the ambitions set out in the International Development Association⁷ (IDA) paper and support UK efforts on three key asks: private sector mobilisation; nature; and 3. ensuring effective reporting and tracking of commitments made in the Climate Change Action Plan. This investment would also be an opportunity for the UK to show broader support for the World Bank Group's Climate Change Action Plan 21-25.

⁴ Blue finance can be defined as investments into projects that restore and protect the ocean environment and support sustainable ocean economic activities ([Strengthening Accountability in Blue Finance](#), World Ocean Initiative, The Economist)

⁵ Since its launch, PROBLUE has received USD ~\$150m in pledged contributions

⁶ [Strengthening Accountability in Blue Finance](#), World Ocean Initiative, The Economist

⁷ The IDA is a part of the World Bank that helps the world's poorest countries, providing zero or low-cost interest loans and grants to 74 countries. The IDA complements the World Bank's lending arm, the International Bank for Reconstruction and Development

1.4 WHAT ARE THE MAIN PROJECT ACTIVITIES?

Project activities across four pillars will vary annually to align with donor and recipient priorities. Activities may include (but are not limited to) the below; for a full list of activities and outcomes, please see Annex C.

Pillar 1: fisheries and aquaculture

- Fisheries-Sector Assessment Toolkit⁸ rollout, which will support more effective and successful fisheries projects
- development of an Aquabusiness Advisory Platform, which will identify aquaculture technologies, best practices and business models, products and markets, and required policy reforms to empower private-sector investment
- supporting countries in Africa to update and/or finalise National Action Plans to combat Illegal, Unregulated and Unreported (IUU) fishing

Pillar 2: preventing and managing marine pollution

- roll out of the tools and methodologies developed in the global flagship work *Pathways Out of Plastic Pollution* to 14 countries globally. The work will identify opportunities for job creation along the plastic value chain, set targets for the reduction and substitution of plastic items, and replicate the effects of policy reforms to create viable incentives for households, private sector and governments to address plastic pollution at each stage of the value chain, in line with the principles of a circular economy
- investment into a solid waste management project in Kerala State in India, combining investments in infrastructure and in policy reforms, informed by assessments and policy analysis on waste and circular economy

Pillar 3: oceanic sectors

- continued support of ESMAP's Offshore Wind Energy Program, with a view to enabling client governments adequately plan and roll out a country-scale spatial assessment of environmental and social aspects of offshore wind development

Pillar 4: integrated seascape management

- studies on the economic impacts of MPAs on local economies (from tourism) was completed in FY21. This work will be expanded to various locations in FY22, to help build the economic case for more protected areas in client countries
- the Blue Economy Development Framework⁹ rolled out to 12 countries across regions, including in Central America, Ecuador, Peru, Jamaica and Tanzania
- tools developed for natural capital accounting, socio-economic assessments and blue financing schemes (including payment for ecosystem services and private-sector engagement)

Example outcomes for a £25m investment include:

- 4 fisheries under sustainable management
 - management of access in (artisanal) fisheries
 - zoning
 - management planning

⁸ The toolkit was developed in FY20, with the aim of providing Bank Task Teams and clients countries with a set of practical tools to help generate the knowledge required for designing, implementing and evaluating projects for capture fisheries for concrete, sustainable outcomes

⁹ The framework consists of three core components, namely: (i) knowledge management; (ii) policy, institutional and fiscal reforms, and (iii) fostering investment in the blue economy. A suite of tools have subsequently been developed in support of the BEDF, to enable client countries to design and implement strategies for blue growth, tailored to their particular circumstances

- awareness raising
 - improved vessel monitoring and reporting
- voluntary collection of obsolete fishing gear at landing sites in (artisanal) fisheries
 - awareness raising
 - infrastructure for collection
 - incentive schemes
 - training
- 800t production of sustainable aquaculture
 - improved production practices through extension (disease control) and access to input (brood stock)
 - innovative financing for processing
 - training on processing
- 2,500 men and women in coastal areas with increased economic opportunities in traditional and/or new economic sectors within aquaculture, of which 50% are women
- Coastal tourism and pollution, including household waste collection and community organisation in plastics collection (beach cleaning through labour-intensive work scheme)
 - 5,000 households connected to solid waste management services
 - 5,000 men and women in coastal areas with increased economic opportunities in traditional and/or new economic sectors, of which 50 % are women
 - 688t leakage of plastics to the environment reduced
 - 6, 000 tCO_{2eq} net GHG emissions reduced
- (Peri-urban) solid waste management
 - access to household waste collection
 - improved coverage and construction of safe disposal
 - increased collection network
 - increased profitability of private operators
 - 25,000 households connected to solid waste management services
 - 2,000 men and women in coastal areas with increased economic opportunities in traditional and/or new economic sectors, of which 50% are women
 - 3,438t leakage of plastics to the environment reduced
 - 18,000 tCO_{2eq} net GHG emissions reduces

Other expected outputs include:

- 50 workshops to be conducted on relevant activities under the pillars (training/capacity-building and consultations)
- 20 tools developed and/or refined (eg. Fisheries Sector Assessment Toolkit, the Blue Economy Development Framework and Pathways out of Plastic Pollution)
- 40 knowledge products prepared (policy papers, studies and analytics work, best practice guidance etc.)
- 10:1 co-financing ratio (IBRD, IDA and other Trust Funds (excluding client contribution))

1.5 STRATEGIC ALIGNMENT

The BPF was launched at the G7 in June 2021. It will contribute to and/or align with other UK strategic priorities, specifically:

Climate change and biodiversity

- **COP26:** PROBLUE activities support four of the five campaigns: adaptation and resilience, nature, energy transition and finance
- **Convention on Biological Diversity (CBD; COP15):** PROBLUE activities under pillars one and three will help the UK to deliver on an ambitious and transformational Post-2020 Global Biodiversity Framework under CBD, in particular the 30by30 campaign and related targets on ecosystem restoration
- **ODA Strategy Framework:** from FY21 onwards, ODA will focus on seven core objectives, of which PROBLUE supports four: climate change and biodiversity, science research and technology, humanitarian preparedness and response and trade and economic development
- **Integrated Review of Security, Defence, Development and Foreign Policy:** in 2021 and beyond, “HMG will make tackling climate change and biodiversity loss its number one international priority.”¹⁰

Finance

- **The Dasgupta Review:** the report emphasises the strategic importance of integrating nature into economics in order to address global challenges.¹¹ Through PROBLUE, the UK will respond to recommendations from the review by directly influencing financial flows – both public and private - towards economic activities that allow our natural assets to prosper and encourage sustainable consumption and production activities
- **International Climate Finance:** the UK has committed to doubling its International Climate Finance (ICF) budget to £11.6bn. Around half of current ICF ODA is spent on adaptation, and the other half on mitigation.¹² Investment into PROBLUE will contribute towards delivering this international commitment
- **Finance for Nature:** investment into PROBLUE will directly contribute towards achieving the £3bn spend target set by the Prime Minister at the One Planet summit in January 2021

1.6 WHAT ARE THE EXPECTED RESULTS?

Results will vary from country to country depending on donor priorities, national contexts and interests, and future workplans and budgets. UK support will therefore contribute towards a wider portfolio, and UK results will be attributed back to the UK pro rata. We expect a broad range of outcomes, a handful of which are listed below (for more outcomes see section “Expected impact, outcomes and activities”, pages 18 - 22).

- ➔ countries supported in a post-Covid “blue” recovery and are better able to manage their marine resources sustainably
- ➔ countries have increased food and nutrition security, revenue security and job security
- ➔ countries develop and establish sustainable blue economies, lifting people from poverty and providing opportunities for alternative livelihoods
- ➔ livelihoods, biodiversity and climate change at the centre of government policy-making
- ➔ an increased supply of bankable pipeline projects, which in turn generates more interest, investment and demand from the private sector
- ➔ increased financial flows towards sustainable activities in fisheries, marine pollution and climate change adaptation and mitigation

¹⁰ [Global Britain in a Competitive Age: The Integrated Review of Security, Defence, Development and Foreign Policy](#), Crown Copyright (2021)

¹¹ [The Economics of Biodiversity: The Dasgupta Review](#), Crown Copyright (2021)

¹² [UK International Climate Finance](#)

- ➔ increased participation from women in project/programming planning and decision-making, and an increase in men and women's equal economic opportunities in traditional and/or new economic sectors
- ➔ interventions specifically designed and delivered in a way that is contextually appropriate for LEDCs and SIDS, thereby aiming to increase the social, environmental, and economic benefits and opportunities of the world's poorest and most vulnerable

Whilst we expect a broad range of outcomes and activities, the UK would use its position on the Partnership Council to drive its global agenda on issues such as marine habitat protection and restoration, IUU, natural capital accounting, and plastic pollution, which would support and mobilise stronger outcomes being delivered through other BPF programming. For example, the World Bank is a key partner in the Global Plastic Action (GPAP) and we would seek to maximise delivery on tackling plastic pollution in GPAP countries to deliver transformational and longer term change on solid waste management.

1.7 RISKS

There are two key risks to highlight regarding investment into PROBLUE:

1. **Limited control over where and how UK funding is spent**, including funding pillars with activities that do not directly or fully fall within Defra's remit (e.g. decarbonising shipping, desalination, and "blueing" ports)

Whilst limited control over spend is common and inherent to multilateral investments, there are reputational risks attached to this. The risks are particularly amplified in light of the overall cut in the ODA budget, which has been reduced from 0.7% GNI to 0.5% GNI (~£4 billion) and greater scrutiny over public spending. The UK will need to clearly communicate the benefits of multi-donor investments, primarily that they are able to achieve and leverage the necessary scale of finance in a way that other methods of funding simply cannot. The UK will use its seat at the Partnership Council to influence how and where funds are spent and will aim to become co-Chair of the Council. Co-Chairs are able to bring into play priority issues and set the agendas for the Partnership Council meetings. For example, Norway used its time as Chair to push for implementation of recommendations from the High-Level Panel for a Sustainable Ocean Economy. As a result, several PROBLUE recipient countries have requested support for implementation. **Co-Chairs rotate annually, and Norway is actively seeking another donor country to take on this position.**

2. Programme **performance and delivery**

PROBLUE is a relatively new programme. It was established in 2018 and has so far received USD ~\$150m from donor contributions. Since its inception, PROBLUE activities have focused on analytical and advisory support to recipient countries to help develop an enabling environment for private sector investment. This year, PROBLUE will begin delivering on the ground. PROBLUE's track record on its advisory and analytics capacity has been strong, but we do not yet have the necessary data to tell us whether or not programming will be successful. Defra will aim to mitigate this risk by developing a robust logframe for PROBLUE that aligns with the BPF investment criteria. Although Defra has not yet invested into PROBLUE, we are confident that the Bank can deliver – donor countries continue to invest into the programme and more countries are joining the programme. This a clear indication that other donor countries believe PROBLUE is delivering successfully, and that it is worth greater investment.

A full risk register can be found in the Management Case on page 57 (section 6.3).

2. STRATEGIC CASE

2.1 CONTEXT AND NEED FOR A UK INTERVENTION INCLUDING MARKET, GOVERNANCE AND INFORMATION FAILURES

2.1.1 GLOBAL CONTEXT

The ocean is a source of great wealth - economically, socially, culturally, spiritually and environmentally. Yet despite its size and importance, the potential for the ocean to continue to underpin vital services is compromised by the increasing pressures of human activity. Over-extraction, habitat destruction, biodiversity loss, pollution and climate change all threaten the health of the ocean. This in turn puts pressure on people living in coastal states, particularly the poorest and most vulnerable. For these reasons, over the past decade we have seen environmental risks grow and steadily climb to the top of the World Economic Forum’s annual risk reports¹³ (figure 1). Those living in coastal communities and SIDS are especially vulnerable as they rely on the ocean for their livelihoods, nutrition, economic growth, and climate resilience. Ocean ecosystems are also a pillar of tourism in many countries. Beyond food security and tourism, the ocean is profoundly connected with economic performance in many other areas, such as international trade and energy production.¹⁴ The most severe impacts from climate change, such as sea level rise and ocean acidification, will be felt by those who rely directly on marine resources for their livelihoods and those living in low-lying coastal areas (by 2030 it is expected there will be 900 million people living in these areas, most of them in developing countries¹⁵).

Figure 1: Top global risks by likelihood



¹³ [The Global Risks Report](#), World Economic Forum (2021)

¹⁴ [Reframing Finance and Investment in the Sustainable Ocean Economy](#), OECD (2020)

¹⁵ [Future Coastal Population Growth and Exposure to Sea-Level Rise and Coastal Flooding - A Global Assessment](#), Neumann et al (2015)

Poverty, vulnerability and a lack of alternative livelihoods can be a driver of marine habitat loss, with resulting impacts on communities' resilience to climate change. In addition, poorer households and communities have significantly less involvement in decision-making, and are less likely to have access to services which can help build resilience (such as insurance or opportunities for savings), and the financial resources to make investments to increase resilience or improve adaptation. The latter disproportionately affects women, who make up the majority of the world's poor.¹⁶ If projects or policies are implemented without women's meaningful participation it can decrease effectiveness and increase existing inequalities.¹⁷ Marine habitats (and the biodiversity within them) also tend to be undervalued in economic decision-making, as the goods and services that they provide (such as cultural ecosystem services, socio-economic resilience, natural infrastructure to mitigate the effects of climate change) are not monetised or measured. Economic incentives work to expand exploitation, creating short-term profits whilst simultaneously damaging the long-term returns of marine ecosystems. Furthermore, marine protection is not always a central policy driver, and governance often fails to represent traditional knowledge and local and community-level stewardship.

2.1.2 BLUE FINANCE: WHAT IS IT?

To tackle the issues above, blue finance must play a critical role in changing the current trajectory and help to achieve a sustainable ocean economy as a matter of urgency.¹⁸ Blue finance can be defined as investments into projects that restore and protect the ocean environment and support sustainable ocean economic activities.¹⁹ Blue finance contributes to the (sustainable) ocean economy (also known as "blue economy"), which is the sum of economic activities from ocean-based industries and the assets, goods and services of marine ecosystems.²⁰ As the world begins to recover from COVID-19, governments have an exceptional opportunity to use finance in a deliberate and careful way as a means to reduce pressures on marine ecosystems and to assure the livelihoods of those millions of people who depend on the ocean. Failure to act will result in public (through financial and economic instruments) and private finance that continues to be directed towards unsustainable activities that damage the marine environment, and that continues to negatively impact the world's poorest and most vulnerable.

2.1.3 BLUE FINANCE: KEY BARRIERS

Current blue finance investments fall well below what is needed to transition to a sustainable blue economy. In the last 10 years, less than 1% (US \$13 billion) of the total value of the ocean has been invested in sustainable projects through philanthropy and official development assistance (ODA),²¹ despite the fact that the ocean supports the livelihoods of 1 in 10 people globally.²² Available evidence indicates that current financial flows are insufficient to meet the costs of the coastal and marine impacts of climate change.^{23 24} **There is an urgent need, then, to increase the quantity of finance directed towards a sustainable ocean economy.**

¹⁶ [Introduction to Gender and Climate Change](#), UNFCCC

¹⁷ Ibid.

¹⁸ [Ocean Finance: Financing the Transition to a Sustainable Ocean Economy](#), High Level Panel for a Sustainable Ocean Economy (2020)

¹⁹ [Strengthening Accountability in Blue Finance](#), World Ocean Initiative, The Economist

²⁰ [Reframing Finance and Investment in the Sustainable Ocean Economy](#), OECD (2020)

²¹ [Ocean Finance: Financing the Transition to a Sustainable Ocean Economy](#), High Level Panel for a Sustainable Ocean Economy (2020)

²² [Mapping global human dependence on marine ecosystems](#), Selig et al (2018)

²³ [Catalysing Ocean Finance](#), Global Environment Facility (2012)

²⁴ [Financing Nature: Closing the Global Biodiversity Financing Gap](#), Paulson Institute

There are considerable challenges that are specific to blue finance (below). Barriers such as these are holding back the transition to a sustainable blue economy, and to ensuring that financial flows are targeted in much more effective ways. More needs to be done to ensure that sustainability is integrated in traditional financial services and investments, in financial markets.²⁵ This means ensuring adequate representation of developing countries in key international processes and negotiations linked to ocean use, as well as supporting improved policies, regulations and financial levers for shifting finance from harmful practices towards sustainable activities.²⁶

Lack of ocean literacy in finance and business sectors

Challenges to blue finance include a lack of knowledge or information and a lack of expertise.²⁷ This includes both the demand and supply side: the High Level Panel's 2020 report on financing states that there is a lack of familiarity with ocean-based project development and financing by both the business and finance sectors.²⁸ Capacity gaps, particularly in developing countries, exist regarding how to access sustainable blue finance.

Data challenges

For investments in the marine environment, there are inherent uncertainties in yield and return. This relates to a lower number of successful case studies/investment examples in the marine space, as well as the significant uncertainty in baseline environmental conditions and the economic role and importance of marine habitats. In comparison to the terrestrial environment, there is less baseline information, and monitoring is more expensive.

Standards and transparency

A lack of a clear definition with standards and transparency is perceived as a challenge to blue finance.²⁹ Specifically, for 'blue' carbon markets there only exist UNFCCC standards for mangroves, and many countries do not yet include wetlands in their GHG emissions inventory. In comparison to the terrestrial environment, there are important gaps in standards and guidance. Linking together evidence, assessment and standards, adequate monitoring and verification procedures as well as adequate impact management procedures have been cited as pre-requisites for "coastal resilience" blue bonds, for example.³⁰

Risk adjusted financial return

In general, for those seeking financial returns there is an inherent challenge with many investments in natural assets, which, by their nature, address public or common goods and positive externalities where there is no market. Many of these projects do not take place without intervention for this very reason: it is difficult to achieve private, financial returns from these projects. With ocean investments, there are additional uncertainties in - and risks to - projects delivering required environmental (and financial) outcomes. There are also likely to be greater risks and uncertainties with project success. For example, blue carbon habitats require a long lead time to reach full sequestration potential (20-25 years for mangroves, 50

²⁵ [Reframing Finance and Investment in the Sustainable Ocean Economy](#), OECD (2020)

²⁶ Ibid.

²⁷ [Investors and the Blue Economy: Ocean risk or opportunity? Is the Blue Economy investible?](#) Responsible Investor

²⁸ [Ocean Finance: Financing the Transition to a Sustainable Ocean Economy](#), High Level Panel for a Sustainable Ocean Economy (2020)

²⁹ [Investors and the Blue Economy: Ocean risk or opportunity? Is the Blue Economy investible?](#) Responsible Investor

³⁰ [Blue Bonds: Financing Resilience of Coastal Ecosystems - Key Points for Enhancing Finance Action](#), Blue Natural Capital Financing Facility (2019)

years for seagrass restoration and up to 100 years for saltmarsh restoration.³¹ This means that blue carbon investments based on restoring or enhancing habitats are particularly sensitive to regulatory and policy uncertainty, which emphasises the need for clear, stable, long-term policies and strong institutions to support them.

Lack of supply/bankable pipeline products

There are impact investors willing to invest in the sustainable ocean, but insufficient options for them to do so. This lack of supply in turn reflects the challenges cited above: projects lack the appropriate deal size and risk-return ratios to match capital, making scaling and replication more complex than in familiar terrestrial sectors.³²

2.1.4 OPPORTUNITIES FOR INTERVENTION

Tackling the identified drivers of marine issues and the associated barriers to increasing the flows of sustainable blue finance, will require an integrated approach. This approach must work with – and for – both private and public sectors if we are to mitigate the impact of unsustainable investments on the blue economy.

PROBLUE presents an opportunity to address this challenge at scale globally, through its ability to strengthen institutions and capacity; lead in innovative blue finance offerings; establish track records of bankable pipeline projects; and strong ambition and commitment to put the ocean at the heart of World Bank investments.

The scope of the programme reflects this, and proposes interventions that include:

- finance for partnerships and investments across the four pillars
- developing enabling conditions to support reforms in partner developing countries to facilitate greater private investment in sustainable ocean-related activities
- measures to support the extension of public and private commitments to utilise marine resources in a more sustainable manner
- leadership, collaboration and learning to tackle the barriers stated above through the development of national and regional data sets, toolkits and frameworks, and addressing lack of supply by developing new pipeline projects

2.1.5 WHY PROBLUE?

What are the identified needs?

An opportunity exists to work in partnership with countries with established and/or growing policy commitments to protect the marine environment and support national or regional initiatives aimed at developing the growth of a sustainable blue economy. There is also an opportunity to align private sector investment in support of those efforts. These opportunities have the potential to realise significant gains in establishing sustainable fisheries and development of aquaculture markets, reduction in marine pollution and the establishment of circular economies, and greater protection of marine assets through marine spatial planning, natural capital accounting and NbS. These opportunities are inextricably linked to the sustainable development in poor and marginalised regions of these countries.

The investment required to realise these opportunities is comprised of multi-donor contributions, targeted explicitly at the development of partnerships with the public and private

³¹ [Developing a Framework for 'Blue Carbon' in Australia: Legal and Policy Considerations](#), Justine Bell-James, University of New South Wales Law Journal (2016)

³² [Ocean Finance: Financing the Transition to a Sustainable Ocean Economy](#), High Level Panel for a Sustainable Ocean Economy (2020)

sectors that catalyse investment in fisheries and aquaculture, marine pollution, “blueing” oceanic sectors and the overall development of sustainable blue economies. The funding will be delivered in a flexible, adaptive and timely fashion, in order to facilitate effective cooperation with public and private sector entities. Notably, the services offered by PROBLUE are demanded by recipient countries to promote sustainability. There is recognition that oceanic activities vary in each country, depending on their unique circumstances and their own conception of a blue economy.

What will the programme do to tackle the drivers of marine degradation and increase the flows of sustainable blue finance?

PROBLUE works to facilitate the development of partnerships between the private sector, public sector and local communities that generate the same, or better, returns from the sustainable use of marine ecosystems and natural capital as from unsustainable practices.

PROBLUE provides (grant) funding and technical assistance to support public-private partnerships that secure responsible investment in oceanic sectors. Under the World Bank, PROBLUE has well-established national offices and regional hubs across the world. These offices are responsible for identifying and developing potential interventions and investments, with the emphasis that PROBLUE must be demand-led by countries.

Over the coming years, the PROBLUE team will continue to work on developing an enabling environment for the private sector. This includes working with governments on policy and reform agendas, regulatory changes, gathering data and filling data gaps for analytics and modelling, developing toolkits and frameworks that form the basis of evidence-based decision-making, and other interventions which make it easier to invest in – and deepen markets for - sustainable business models.

PROBLUE leverages funding by investing in the upstream analytics that constitute the baseline to inform International Development Association (IDA) and International Bank for Reconstruction and Development (IBRD) projects. For example, Cambodia received support from the World Bank and other partners to improve solid waste management. PROBLUE provided analytical and advisory support to help the government and stakeholders better understand the magnitude of plastic pollution, and to identify possible solutions to better manage plastics and to improve overall solid waste management. This work in turn has led to the preparation of a USD \$60m IDA credit operation. PROBLUE estimates a 10:1 co-financing ratio (IBRD, IDA and other Trust Funds (excluding client contribution)).

In parallel, from this financial year onwards, PROBLUE will begin to deliver technical assistance projects on the ground. The programme will work to develop an increasing supply of pipeline projects, which will in turn help to overcome the barriers stated above, including those of risk adjusted financial returns and lack of supply. PROBLUE will start with three pilot projects across Africa and Asia. USD~ \$15m will be invested in creating market-ready investments that offer an attractive balance of risks and returns for all partners, with the intention to mobilise further investment, principally from the private sector, in the future.

UK influence in the World Bank

Investment into PROBLUE brings with it several important strategic advantages:

1. **a seat (and potential to be future co-Chair) at the Partnership Council (PC):** The Partnership Council sets the strategic direction and priorities of the Fund. Over the next few years, the UK will invest in relationships with the Secretariat and with other donors to build alliances. In doing so, it will have the ability to influence the wider PROBLUE portfolio, including the direction and activities of the overall programme

budget (~\$150m USD), not simply the UK's contribution. This allows the UK to influence outcomes much beyond the lifetimes of the projects and programmes themselves. **Currently the UK holds observer status as a potential future donor, which means that the UK does not have any decision-making powers.** Co-Chair of the PC brings additional benefits – they are able to bring into play their priority issues and set PC agendas. The UK would also seek to influence any technical and/or sub-committees that advise the PC. The UK would therefore be able to drive its global agenda on issues such as marine habitat protection and restoration, IUU, natural capital accounting, and plastic pollution, which would support and strengthen other BPF programming (e.g. Ocean Country Partnership Programme, Ocean Risk and Resilience Action Alliance, Global Ocean Accounts Partnership and the Global Plastics Action Partnership)

2. **delivering key political objectives:** to enhance UK influence across environmental and prosperity issues, and especially within the MDBs. The UK has a strong MDB reform agenda, as outlined in the IDA paper and support UK efforts on three key asks: 1. private sector mobilisation; 2. to create a new methodology for tracking and reporting on nature finance and to set a new nature target; 3. ensuring effective reporting and tracking of commitments made in the Climate Change Action Plan. An investment into PROBLUE signals the UK's seriousness of enacting change in the MDBs to protect nature, in particular the marine environment. An investment during the “super year 2021” - where the UK is specifically seeking commitments from MDBs on nature - would strengthen the UK's influence to ensure there is a strong offer for the ocean. By the end of 2021, ahead of taking on the co-chair of PROBLUE, we will have an agreed strategy on MDB reform for the marine environment and this will play a significant part of what we wish to achieve during our year as co-chair.
3. **UK credibility in blue finance and the sustainable ocean economy:** blue finance and the sustainable ocean economy are still very nascent, especially in comparison to nature and climate finance. UK leadership within that is even more embryonic. Although there is no lack of ambition to help countries establish their sustainable blue economies, the UK does not have the same historical success from a consistent, reliable pipeline of projects and programmes as it does for international climate finance (ICF) and nature finance. PROBLUE positions the UK to begin this work. Influence goes much beyond procedural/positional status – it is also about credibility. PROBLUE provides entry into the blue finance space. This will allow the UK to build a credible position on blue finance and the sustainable blue economy, with the long-term intention of driving greater ambition within MDBs and private sector on marine issues.

What does success look like?

Following a one-year investment, we expect to assess performance against the following:

1. PROBLUE's ability to spend the allocated funding with financial probity: we expect PROBLUE spend at least £6m between April 2021 – March 2022 on activities that align with BPF outcomes and objectives. PROBLUE will have sufficient monitoring in place to provide performance and financial oversight, manage risks and support decision-making at appropriate levels. In accordance with the FCDO Programme Operating Framework, we expect PROBLUE budgets to be accurately profiled and forecast, regularly reviewed and updated as necessary. We expect budgets to be supported with financial reports, so that Defra can have confidence in allocated spend. This will allow us to review spend against BPF objectives and outcomes more clearly.
2. PROBLUE's delivery against expected milestones and targets: supported by economists, Defra will work closely with PROBLUE to develop a robust logframe that clearly lays out what success looks like in terms of impact and outcomes, both

quantitatively and qualitatively. Success will be measured by how much and how well milestones and targets are achieved. These could include:

- a. a leveraging ratio of 10:1 (with a view to revising this ratio in future years as the programme expands delivery on the ground) and
- b. the number of World Bank Group operations “blued” as a result of PROBLUE investment (and potentially broken down by each of the three arms of the Bank, the International Bank for Reconstruction and Development, the International Finance Corporation and the International Development Association). We could also seek to prioritise the logframe targets and milestones and develop a set of minimum expectations (i.e. those milestones that must be met, should be met, could be met etc.)

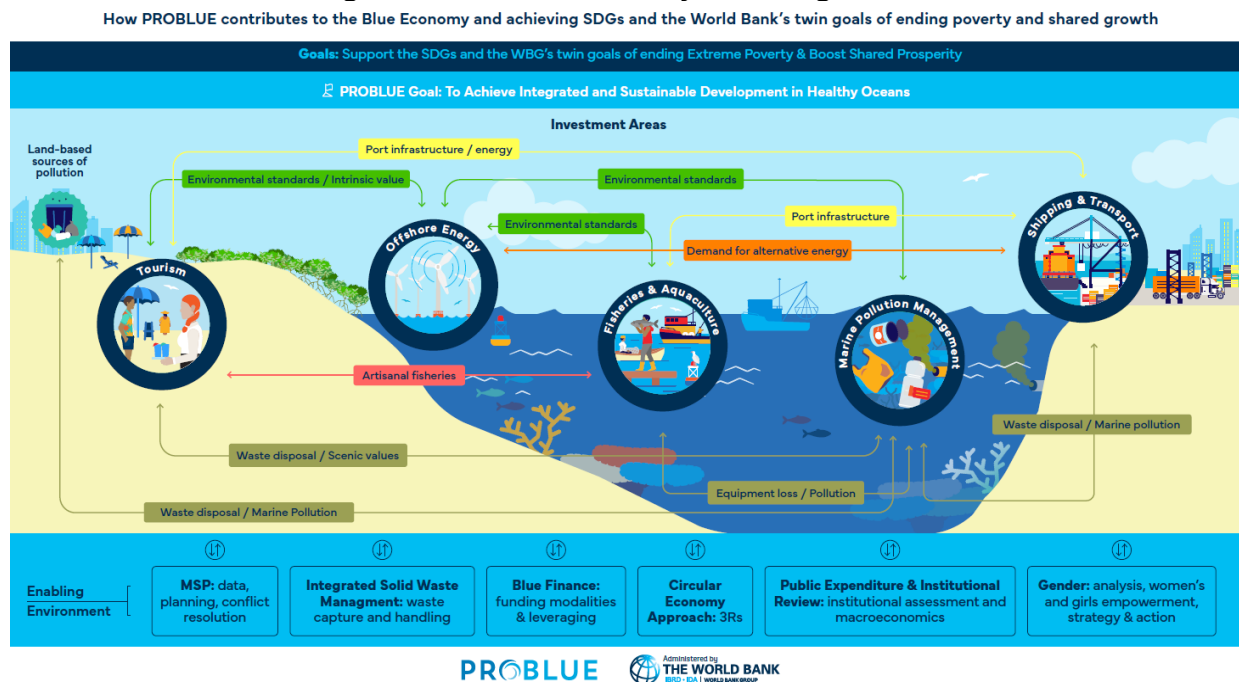
3. Successful implementation of specific activities (tbc with the Bank) for the three pilot projects

MDB reform will be addressed in the second year of investment. Following the outcomes of the COP26 negotiations, Defra will work with FCDO and UKDEL over the next six – nine months to build upon that work and to establish and define the areas in which to influence PROBLUE in order to achieve the UK’s wider MDB reform agenda. We’ll seek to work with relevant teams from across-government to inform our position.

2.1.6 THEORY OF CHANGE

The PROBLUE theory of change captures the impacts that are expected between the different sectors: individual activities supported by PROBLUE take a “multi-pillar” approach, where operations in a single sector have cascading impacts on the other sectors of the blue economy. The focus is therefore on the number of PROBLUE activities that achieve results in and across multiple sectors, and contribute to the broader goal of achieving integrated and sustainable development in healthy oceans.

Figure 2: PROBLUE Theory of Change



2.1.7 EXPECTED IMPACT, OUTCOMES AND ACTIVITIES³³

Example outcomes for a £25m investment include:

- 4 fisheries under sustainable management
 - management of access in (artisanal) fisheries
 - zoning
 - management planning
 - awareness raising
 - improved vessel monitoring and reporting
 - voluntary collection of obsolete fishing gear at landing sites in (artisanal) fisheries
 - awareness raising
 - infrastructure for collection
 - incentive schemes
 - training
- 800t production of sustainable aquaculture
 - improved production practices through extension (disease control) and access to input (brood stock)
 - innovative financing for processing
 - training on processing
- 2,500 men and women in coastal areas with increased economic opportunities in traditional and/or new economic sectors within aquaculture, of which 50% are women
- Coastal tourism and pollution, including household waste collection and community organisation in plastics collection (beach cleaning through labour-intensive work scheme)
 - 5,000 households connected to solid waste management services
 - 5,000 men and women in coastal areas with increased economic opportunities in traditional and/or new economic sectors, of which 50 % are women
 - 688t leakage of plastics to the environment reduced
 - 6, 000 tCO_{2eq} net GHG emissions reduced
- (Peri-urban) solid waste management
 - access to household waste collection
 - improved coverage and construction of safe disposal
 - increased collection network
 - increased profitability of private operators
 - 25,000 households connected to solid waste management services
 - 2,000 men and women in coastal areas with increased economic opportunities in traditional and/or new economic sectors, of which 50% are women
 - 3,438t leakage of plastics to the environment reduced
 - 18,000 tCO_{2eq} net GHG emissions reduces

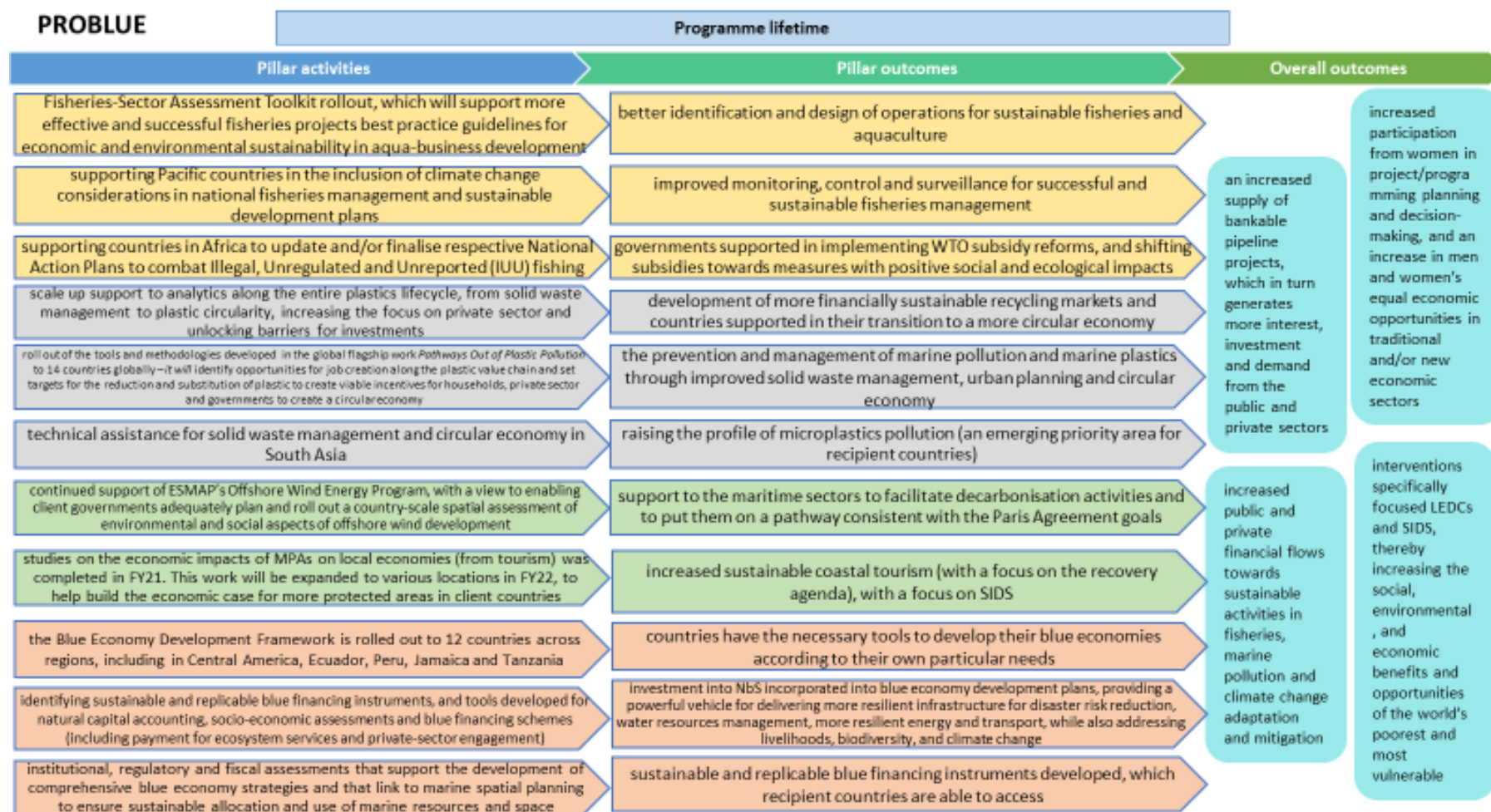
We also expect:

- 50 workshops to be conducted on relevant activities under the pillars (training/capacity-building and consultations)
- 20 tools developed and/or refined (eg. Fisheries Sector Assessment Toolkit, the Blue Economy Development Framework and Pathways out of Plastic Pollution)

³³ For a full list of activities and outcomes under each pillar, please see Annex C

- 40 knowledge products prepared (policy papers, studies and analytics work, best practice guidance etc.)
- 10:1 co-financing ratio (IBRD, IDA and other Trust Funds (excluding client contribution))

Other example outcomes



2.1.8 CONCLUSION

Given the scale of the challenges in the marine environment, the inequitable distribution of blue finance and the chronic underfunding within the marine economy, public funding alone cannot effect the necessary change to achieve a sustainable ocean economy: the blue finance gap needs to be closed. There is, therefore, significant potential for private finance to fill this gap, contributing both funding and expertise. If private finance is to support in a meaningful way, however, it remains incumbent upon governments to help mobilise and derisk that finance. Driving the necessary and deep transition in the global financial systems and the amount of investment required to meet the challenges of climate change and loss of natural capital can only be done through the influence that governments can wield. **The UK can exert that influence through this investment into PROBLUE.**

Established ocean sectors command substantial capital flows from both public and private sources, but current policies and incentives mean the most financially attractive investments usually drive the most unsustainable activities.³⁴ **As more financial capital enters ocean-based industries, both established and nascent, it is critical that the UK acts to steer investment towards improved sustainability, driving finance towards the substantial opportunities that sustainable activities represent, and, more importantly, to ensure the equitable distribution of benefits.**³⁵

Before the COVID-19 pandemic, the global ocean economy was projected to continue to grow at twice the rate of the rest of the economy for the coming decade.³⁶ The economic and social crises resulting from the pandemic has had severe impacts across ocean sectors. The speed and nature of both economic and social recoveries will have important implications not only for jobs and livelihoods, biodiversity and habitats, but also for the sustainability of future ocean activities – and consequently on the state of ocean health – for years to come. The latest IPCC report³⁷ states that *human adaptation to climate change is now inevitable*, and that *adaptation will need to be transformative*. We are at a pivotal decade in terms of whether and how the world, and the UK, meets our climate commitments and environmental obligations, commitments and obligations that will require deep, strategic changes in key ocean sectors as well as throughout the broader marine economy. Continuing on a ‘business-as-usual’ trajectory poses great risks to the health and resilience of the ocean, and therefore to each and every human on the planet³⁸; *pursuing such a damaging approach is not inevitable*.

³⁴ [Reframing Finance and Investment in the Sustainable Ocean Economy](#), OECD (2020)

³⁵ Ibid.

³⁶ Ibid.

³⁷ IPCC report - currently embargoed

³⁸ [Ocean Finance: Financing the Transition to a Sustainable Ocean Economy](#), High Level Panel for a Sustainable Ocean Economy (2020)

2.2 WHAT SUPPORT WILL THE UK PROVIDE?

2.2.1 UK INVESTMENT

PROBLUE is about to enter its third year, where funding will begin to shift towards delivering projects on the ground. Donors are given the option to either select one or four pillars where they would want their funding to be preferenced, or to agree to have their resources spread over the four pillars. Previous donors have opted to focus on one pillar for their initial contribution and subsequently preferenced others; others contributed with no preferencing. Pillar two (marine pollution) is the best-funded pillar, with ~50% of the total budget. In its first year of investment, **the UK would seek to place its investment into all four pillars**, which will have the following benefits:

- channels funding to **support all BPF ToC pathways and outcomes**
- provides the UK with **greater influence at the Partnership Council** and over the strategic direction and budgets in all four pillars, especially if the UK becomes co-Chair
- provides **greater overall impact** through co-mingling of other funds across the PROBLUE portfolio
- provides **greater resilience to the overall BPF portfolio by spreading risk**
- provides **greater resilience to the overall BPF portfolio through PROBLUE's capacity to absorb underspend** from other programming and spreading it across pillars

UK funding will be invested by a contribution in Pound Sterling (£). UK investments are then co-mingled with other donor funding, including investments from Australia, Canada, Denmark, the European Commission, France, Germany, Iceland, Ireland, Norway, Sweden and the US. The UK's contribution will form ~20% of PROBLUE's annual budget for this financial year. It should be noted that **the World Bank's financial year runs from 1 July to 30 June annually**. The overall PROBLUE budget will be used to leverage private sector investment across the four programmatic pillars and across the Bank's wider portfolio.

Defra will contribute £6m in the first year of investment. Any potential **subsequent funding will be subject to performance reviews, and to the successful delivery of agreed objectives**. Defra may also seek to put additional investment into PROBLUE, above the figures given below.

Table 1: PROBLUE potential spend profile

	2021/2	2022/3	2023/4	2024/5	2025/6	Total
PROBLUE (£ million)	£6m	£4.75m	£4.75m	£4.75m	£4.75m	£25m

2.3 HOW WILL THIS PROGRAMME CONTRIBUTE TO DEFRA AND OTHER POLICY OBJECTIVES?

Investment into PROBLUE is strategically aligned with Defra's departmental priorities and the UK's wider international commitments. The cross-cutting and regional approach to programming therefore achieves multiple objectives across a broad set of geographies, and directly supports the following strategic priorities:

2.3.1 CLIMATE CHANGE AND BIODIVERSITY

COP26

As COP26 President, the UK will focus on five campaigns that will accelerate the transitions necessary for countries to gain the benefits of clean, affordable and secure energy, cleaner air, a more resilient environment, a greener economic recovery and a safer climate.³⁹ PROBLUE activities support four of the five campaigns:

- **Adaptation and resilience:** all four PROBLUE pillars support coastal communities to adapt to the impacts of climate change, and in doing so build resilience amongst the most vulnerable and most affected. Activities range from bilateral work (e.g. analysis on the impact of climate change on Indonesia's fisheries to inform the Ministry of Marine Affairs and Fisheries contribution to the National Climate Adaptation Plan) to transforming whole sectors, such as energy and transport
- **Nature:** through its integrated seascapes pillar, PROBLUE invests in the scale-up of marine nature-based solutions to support the ocean-climate-biodiversity nexus. PROBLUE helps to close the existing technical and financing gaps needed to scale-up these coastal infrastructure solutions, which is a major priority for the UK's international focus on climate change and biodiversity
- **Energy transition:** the High Level Panel report on the ocean as a solution to climate change cites ocean-based renewable energy as one of its top five solutions, with activities ranging from strategic roadmaps for carbon-zero economies to advanced storage design and capacity.⁴⁰ One of the focal points for PROBLUE's third pillar is offshore renewable energy (wind power), in a growing number of developing countries. Work under this pillar is still very nascent, but PROBLUE works with the Bank's Energy Sector Management Assistance Program (ESMAP) to develop social impact guidelines for offshore wind development that include preferential training and jobs for fishers willing to use their maritime skills to transition to employment in the offshore energy sector. PROBLUE will eventually play a critical role in providing large-scale finance to accelerate the transition to clean energy, and to ensuring that the most fossil-dependent coastal communities achieve a just transition
- **Finance:** the long-term transition to a net zero and resilient future requires trillions of dollars of investment and an unprecedented shift in the global financial system⁴¹; ocean-based solutions and the sustainable blue economy *must* be integrated into all financial institutions and decision-making. UK investment through PROBLUE will support the UK's ambition to transform investment environments in developing countries and emerging markets. It will also provide additional evidence of the UK's commitment to meet the goal of mobilising USD \$100bn a year for developing countries, which can only be done collectively with other donors and key players in the financial sector, such as the World Bank. HMT requires that 25% of Defra's Blue Planet Fund is ICF. Our PROBLUE investment will contribute to this requirement.

COP15 (Convention on Biological Diversity)

PROBLUE activities under pillars one and three, in particular, would help the UK to deliver on an ambitious and transformational Post-2020 Global Biodiversity Framework under CBD, in particular the 30by30 campaign and related targets on ecosystem restoration, reducing species extinction and sustainable use of the ocean.

ODA Strategy Framework

Last year, the Foreign, Commonwealth and Development Office (FCDO) undertook a comprehensive review across the entire ODA portfolio. From FY21 onwards, ODA will be focus on seven core objectives, of which PROBLUE supports four:

³⁹ <https://ukcop26.org/uk-presidency/campaigns/>

⁴⁰ *The Ocean as a Solution to Climate Change*, High Level Panel for a Sustainable Ocean Economy (2019)

⁴¹ <https://ukcop26.org/uk-presidency/campaigns/>

1. **Climate change and biodiversity:** pillars one (fisheries and aquaculture), three and four (blueing oceanic sectors and seascape management respectively), particularly support this objective. Activities range from supporting national and regional strategies to reduce IUU fishing and improve the environmental and socio-economic performance of the fisheries sector in South Asia and South East Asia, to appraising India's approach to natural capital accounting and coastal ecosystem valuation
2. **Science, research and technology:** science and research underpin all PROBLUE programming. Examples range from fisheries bioeconomic modelling in Indonesia to completing a comprehensive national diagnostic of plastic waste as part of municipal solid waste in Indian cities. PROBLUE also aims to exploit new advances in technology across its pillars
3. **Humanitarian preparedness and response:** although humanitarian preparedness and response are not the core focus, PROBLUE's work on NbS as a powerful investment vehicle for delivering more resilient infrastructure for disaster risk reduction supports efforts to reduce socio-economic and environmental vulnerabilities to disaster. Work includes influencing project design that promotes and strengthens policy reforms and investments on reduction of coastal disaster risks and pollution, whilst maximising the coastal nature-based tourism industry and generating and disseminating knowledge
4. **Trade and economic development:** economic development through the sustainable blue economy is at the core of PROBLUE, and reflected in its overarching mission to *achieve integrated and sustainable economic development in healthy oceans*

2.3.2 FINANCE

The Dasgupta Review

The report argues that we cannot successfully overcome current climate and environmental challenges until nature is fully integrated into macroeconomic models of growth and development.⁴² Evidence is presented on the important role of NbS in economic and environmental recovery, including the links between ecosystem health and the value of ecosystem services. Through PROBLUE, the UK will respond to the review's recommendations by directly influencing financial flows towards economic activities that allow our natural assets to prosper and encourage sustainable consumption and production activities.

International Climate Finance

Investment into PROBLUE will contribute to the UK's commitment to double its ICF budget to £11.6 billion, with programming cutting across both adaptation and mitigation. ~30% of PROBLUE finance contributes to adaptation and mitigation measures and through PROBLUE, the UK would fund significant climate change related activities.

Finance for Nature

Investment into PROBLUE will directly contribute towards achieving the £3 billion spend target set by the Prime Minister at the One Planet summit in January 2021. The Prime Minister committed £3 billion to climate change solutions that protect and restore nature and biodiversity over five years.

2.2.3 INTERNATIONAL CLIMATE FINANCE

⁴²[The Economics of Biodiversity: The Dasgupta Review](#), HM Treasury, Crown Copyright (2021)

It is estimated that 30% of the investment will be attributable to International Climate Finance (ICF). This is finance that directly contributes to adaptation and mitigation measures to enhance climate resilience building. These are PROBLUE proposals that have climate change-related activities and that have allocated specific budget to climate change. This is based on calculations using Rio Markers, and the planned activities the UK will fund which include improving the ocean's resilience to climate change.

PROBLUE will follow ICF regulations and reporting, which are also embedded into the BPF MEL framework.

2.4 RISKS

The top two risks we envisage at present have been considered in section 1.7 (pages 10-11). A full risk register, along with mitigation actions and how risks will be escalated, can be found in the Management Case section 6.3 (page 57).

3. APPRAISAL CASE

3.1 APPRAISAL APPROACH

The appraisal case evaluates the options for investment and, where appropriate, the expected results of these options. This case considers four options⁴³ for investment which address the issues laid out in the strategic case as well as meeting the BPF investment criteria.

The assessment is multistage:

1. we consider whether the proposed delivery partner meets the BPF investment criteria – criteria designed to assess value for money (VfM) of the project (detail in Annex C)
2. the strategic criteria (critical success factors) associated with this business case, specifically, are used as a further filter on the delivery partner where multiple partners meet the BPF investment criteria
3. we assess the delivery and financing options with the preferred delivery partner

If the options pass the minimum requirements of the BPF investment criteria they are scored relative to each other and against the below strategic criteria. Only those options which are considered adequate across the investment criteria and critical success factors (below) are considered for quantitative analysis.

Critical success factors

- Nature in MDB - *allows the UK to leverage its investment to influence the MDBs to increase consideration on nature and ocean issues within normal programming*
- Thematic areas and pathways -*the preferred option must act across biodiversity, climate change, pollution, and seafood, as well as across multiple BPF ToC pathways*
- Adding value to mainstream projects - *significant value can be added by identifying existing projects around the world which can be 'blued' – that is value added to these projects by adding or expanding the marine focus of them. Often this takes a small amount of finance to do because the structural network of the projects is already in place and can be leveraged*

⁴³ Plus a 'do nothing' option

3.2 LONG LIST OPTIONS

A number of options were considered in order to address the barriers to sustainable ocean finance laid out in the strategic case.

3.2.1 OPTION 0: DO NOTHING

Global picture

The strategic case clearly articulates the need for action to protect the marine environment to allow sustainable use of the resources for economic development and poverty alleviation. Human activities, both direct and indirect, are placing severe pressures on our ocean systems the impacts of which disproportionately impact those living by the coasts and those who have more limited adaptation options (i.e. the world's poorest people). Nature across most of the globe has now been significantly altered by multiple human drivers, with the great majority of indicators of ecosystems and biodiversity showing rapid decline.

Without support and political will within the international and national architectures, economic incentives and growth strategies will continue to favour expanding economic activity over the conservation of ecosystems (since they do not consider the multiple benefits of these ecosystems). For example, the removal of mangrove forests for coastal developments, including aquaculture; IUU fishing causes yearly economic loss of between USD \$26 billion and \$50 billion.⁴⁴

Not acting now as a global community risks very large costs in the future. The UK is seen as a leader in nature and climate financing, and will be looked to by other countries to set the direction of future financing. Without this direction and commitment, the ocean will continue to face an underinvestment challenge.⁴⁵

In a 'Do Nothing' scenario there will be other BPF programmes that will tackle the same themes we are seeking to invest in, such as marine pollution, sustainable aquaculture, policy design and technical assistance. However, there is expertise and influence in existing organisations and initiatives that the UK government would benefit supporting to demonstrate commitment and leadership. There are some countries that may partner with more than one BPF programme, but due to the different focus of these programmes, outcomes will differ. For there to be significant improvement to the marine environment to address poverty alleviation different interventions are needed to make the change, and demonstrate the UK's commitment towards the marine environment.

Overall, doing nothing does not meet any of the BPF investment criteria considerations, largely due to a lack of action: the barriers mentioned in the strategic case such as, lack of ocean literacy in finance and business sectors, lack of risk adjusted financial returns and lack of bankable pipeline projects, will continue and be tackled a slower rate if investment is not increased. Therefore, this option was **rejected**.

3.2.2 OPTION 1: GLOBAL ENVIRONMENT FACILITY (GEF)

This option considers additional investment into the GEF (the UK is already a major donor). The GEF is one of the few multilateral funds for the protection of the environment and therefore an additional contribution from the BPF was considered. The UK is one of many donors to the

⁴⁴ [Illicit trade in marine fish catch and its effects on ecosystems and people worldwide](#), Science Advances 6, U.R. Sumaila et al (2020)

⁴⁵ Just 1.6% of bilateral ODA supports the ocean economy and only 5% of all ODA environmental spend is focused on the marine environment

GEF and the facility does crucial work on environmental and development issues of global importance, including the marine environment. The focus of the GEF is both terrestrial and marine biodiversity, with 9% of ODA being labelled as for the sustainable ocean economy⁴⁶.

3.2.3 OPTION 2: PROBLUE

PROBLUE, a World Bank multi-donor trust fund, is the Bank's only multilateral fund that supports the leverage of blue finance towards sustainable ocean sectors and activities. It supports the achievement of Sustainable Development Goal (SDG) 14, Life Below Water, and the World Bank Group's (WBG) twin goals of *ending extreme poverty and boosting shared prosperity*. PROBLUE aims to do this by reducing the blue finance gap through creating an enabling environment for private sector fund activities that encompass the sustainable blue economy. PROBLUE recognises that ocean-related activities vary in each country, depending on national circumstances and vision of a blue economy. Therefore, the financial services offered by PROBLUE are demand-led by recipient countries with the programme focusing on SIDS and coastal LDCs.

3.2.4 OPTION 3: SUSTAINABLE BLUE ECONOMY FINANCE INITIATIVE (SBEFI)

The Sustainable Blue Economy Finance Initiative (SBEFI)⁴⁷ is a UNEP hosted initiative which works in partnership with the financial community to enable institutions to “rebuild ocean prosperity, restore biodiversity and regenerate ocean health”. The initiative is a technical assistance initiative focussed on galvanising the financial community around the Sustainable Blue Economy Finance Principles.

The initiative “facilitates collaborative projects to develop methodologies and tools, encourage harmonization, promote advances in good practice, and support leadership to accelerate growth in the quantity and quality of sustainable financial institutions”. Working in partnership with institutions, scientists, and civil society it provides guidance and frameworks to ensure investments, insurance and loan operations are aligned to SDG 14. The initiative has more than 350 members from the finance community and over 100 institutional partners. The broad membership suggests that the initiative can act across multiple themes and reduce risks to the marine environment through applying the principles and guidelines that they have developed across sectors.

3.2.5 OPTION 4: BLUE NATURAL CAPITAL FINANCING FACILITY (BNCFF)

Supported by the Government of Luxembourg and managed by IUCN, the Blue Natural Capital Financing Facility (BNCFF) was launched in 2018. BNCFF focuses on advancing viable coastal climate resilience projects and providing ecosystems service benefits locally and globally. The Facility supports the development of “sound, investable blue natural capital projects with clear ecosystem service benefits, based on multiple income streams and appropriate risk-return profiles.” The projects are designed to realise social, environmental and economic returns. Projects which the facility might finance include conservation and restoration of habitats such as mangroves and sea grasses, climate mitigation and adaptation, sustainable development, food security and enhancing local livelihoods.

The Facility works with projects to reduce the risk of blue natural capital investments and enable them to structure projects into investable opportunities which the Facility can then assist in accessing debt, equity and donor funding. The assistance tends to focus on preparing

⁴⁶ Based on data from the OECD database. Total ODA spent: Creditor reporting system (CRS), <https://stats.oecd.org/Index.aspx?DataSetCode=crs1#> ODA spent on ocean economy: Finance for the Sustainable Ocean Economy, [OECD Data Platform on Ocean Finance \(shinyapps.io\)](https://oceanfinance.org/)

⁴⁷ [Sustainable Blue Finance – United Nations Environment – Finance Initiative \(unepfi.org\)](https://www.unepfi.org/)

the technical, legal and financial aspects of a project which is supported by evaluations. It further assists projects to access the vital seed funding for proof of concept purposes. In terms of direct funding the Facility provides grants or reimbursable grants appropriate to the project needs.

3.3 LONG LIST SUMMARY CONCLUSIONS

The UK is unable to earmark funding to specific issues in the GEF, and therefore only some of any additional UK finance might go towards marine issues. Due to the lack of marine focus and the limited UK influence on the fund, the GEF was **rejected** as an option to be further considered.

PROBLUE is considered for the short-listed options - the fund is well established with a proven track record on funding environmental causes globally, and it already operates programmes in some of the key UK/BPF priority areas (which the UK has an opportunity to influence). The UK currently holds observer status, which has allowed us to understand their operations, ways of working and gain confidence in the potential and actual impacts of PROBLUE on coastal economies. As a significant donor, the UK could have a large influence on the strategic direction of the fund and set priorities to target specific issues or delivery modalities. We could also have an influence on the wider WB/MDB architecture and priorities through a significant commitment to PROBLUE.

SBEFI has been **rejected** due to the initiatives focus on delivering guidelines and tools and therefore has no direct or immediate impact on poverty. The focus on financial institutions limits the ability for the initiative to leverage change on the ground, whilst delivery via UNEP limits our ability to influence the MDB architecture. It is also questionable the level of influence that the UK would have to ensure the fund aligned with our priority geographies or ODA framework.

For BNCFF, the additionality of the financing facility was less clear. It was noted that whilst taking a multi sector approach, the facility is primarily focused on blue natural capital projects and achieving impacts through the promotion of these. It was also recognised that it was not delivered by an MDB and therefore it would not contribute to the leverage the UK has with MDBs to increase nature financing. Therefore, this option was **rejected**.

Options for investment described in the above section were scored against the investment criteria and key success factors which can be found in Annex C.

3.4 APPRAISAL APPROACH – SHORT LIST OF OPTIONS

The Blue Natural Capital Financing Facility was rejected as an option at the strategic criteria stage and therefore we do not consider it as a do minimum. PROBLUE scored best of the delivery partner options explored against the investment criteria and the strategic criteria. Overall, there are challenges and uncertainties in the ex-ante appraisal, and assessment of Value for Money, due to:

- **evidence gaps** in the ‘business as usual’ situation, i.e. we don’t have certainty on what would happen without action from the UK Government. This includes uncertainties regarding investment by other countries into PROBLUE as well as the scale of pressures, trends and action of others
- **lack of evaluations** of completed PROBLUE programmes across the different pillars, making it challenging to assess their likely benefits

- **inherent challenges in appraising a portfolio that isn't yet decided**, such as uncertainties of spend per pillar, programmes and countries which determine the array of potential benefits, costs per programme and expected results

Evaluations are planned through Annual Reviews, the Mid-Term Review, and the Final Review. Given the difficulties in assessing value for money ex-ante, value for money assessments are not routinely conducted by the WB when programmes are proposed to PROBLUE (see section 3.6 for details on monitoring and evaluation plans). Year one performance will be tracked via input and activity indicators such as disbursement rates and number of projects funded.

Given these challenges and uncertainties, the appraisal of each option broadly set out the expected benefits for poverty reduction and the marine environment, the approach to quantify benefits where possible, a description of the costs, with an assessment of a (partial) BCR and Net Present Value (NPV).

The World Bank has provided examples of investment projects and the benefits that could be attributed to UK investment. Investment programmes have been suggested for different pillars demonstrating an array of activities and targets that could be achieved with a \$36m spend from HMG. The \$36m would be used to co-finance 8 investment projects that have a duration of 5 years each. However, the evidence provided to support the benefits have varying degrees of confidence. Therefore, a breakeven analysis is used to demonstrate the minimum outcomes needed for the monetised benefits to equal the cost, is included as part of the appraisal. Assumptions needed to be made regarding the possible monetised benefits for the different outcomes, therefore a BCR and NPV range is also used, with the range dictated by the estimated range of potential outcomes and monetise benefits explained in Option A which applies to all options. The BCR and NPVs should be considered illustrative, as the minimum, given the assumptions made and the benefits which have not been possible to monetise.

3.5 APPRAISAL OF SHORTLISTED OPTIONS

The UK has options in how to invest in PROBLUE - the **amount of finance** to be invested, in **which pillars** but additionally *where* that finance is invested. The UK can either select one of the four pillars to invest in or all the pillars. Alternatively, the UK could dictate the region to where the finance would be focused. No donor can select one pillar and specify geography.

Within the constrained UK ODA budgets and overall available finance to meet the strategic aims of the BPF, different financing opportunities were considered. Therefore, we have considered the following investment options below as the short-listed options:

- **Option 0: Do nothing:** explored above
- **Option A (Do minimum):** invest in pillar two, marine pollution for £3.6m in one year with no choice in geography to focus investment
- **Option B (Preferred):** invest over 5 years, £25m across the four pillars with no restriction on geography
- **Option C (Do maximum):** invest £50m over five years (£10m/year) across all four pillars without any restrictions on geography

The activities are opportunity driven and country-led, and as mentioned above, benefits are uncertain to provide reliable and reasonable quantitative VfM metrics such as a single benefit-cost ratio or net present value. Therefore, we provide a range for the benefit-cost ratio and net present value that uses a low and high estimate for monetised benefits. But also, a break-even analysis to provide an indication of the minimum level of outcomes needed to be achieved to provide value for money.

3.6 VALUE FOR MONEY APPRAISAL

3.6.1 OPTION A - DO MINIMUM: FUND £3.1M FOR ONE YEAR IN PILLAR 2

The 'do minimum option' for this business case is to invest in PROBLUE at a limited level. Under the do minimum the UK would **invest £3.1m (\$4.3m) in PROBLUE in only one pillar** (Pillar 2: preventing and managing marine pollution). Pillar two focusses on reducing plastic pollution in the marine environment. There are two forms of plastic pollution considered: fishing gear and terrestrial waste. From the example investments provided by the World Bank, the latter is mitigated through behavioural change programmes to encourage recycling and the former through fisheries gear schemes.

Benefits

Reducing marine litter through investment in this Pillar can ultimately be expected to lead to **improved health**, directly and indirectly through ingested seafood, lower exposure to open burning, plus implications for **tourism, fishing, and further income opportunities**. Through support of this pillar there will be opportunities to **reduce poverty, improve livelihoods and protect the marine environment**.

The World Bank has provided a list of example investments with potential benefits. The indicative projects used for this option are 4,5 and 7, the Pillar 2 projects⁴⁸. The full list with descriptions can be found in Annex D, but are summarised in box A. To appraise the future programme with a partial BCR and partial NPV we have:

1. Assumed that potential projects will start during the one-year partnership.
2. The WB's example investments provided for Pillar 2 are for over a 5-year period of investment. We estimate that if we only invest for a year instead of five, then only a fifth of the suggested households and therefore outcomes would occur due to HMG contribution. However, these figures were deemed too high. Therefore the following assumptions were made:
 - 2.2. Quantify the benefits of GHG emissions reduced using mismanaged waste forecasts. The targets provided by the WB were considered too high, based on the types of countries they will be working in (LDCs and SIDs) and available evidence on the modelled mismanaged waste in these countries. Least developed countries are forecast to produce 25kg of waste per person whilst in SIDs 61kg per person⁴⁹. These figures determine the low and high scenarios of mismanaged waste produced and therefore emissions. We assume that depending on the project activities, whether infrastructure or behavioural interventions, between a quarter and a tenth of mismanaged waste can be reduced. This range is reflected in the This results in the emissions reduced being 2%-8% of the targets quoted by WB therefore incorporating an optimism bias into our analysis. For the lower estimate the low scenario prices from BEIS are used and for the high the high scenario prices are used.
 - 2.3. Assume that 3kg of plastics is leaked into the ocean per person. Again, the estimates from the World Bank were adjusted down, to reflect potential optimism bias and

⁴⁸ Projects 3 and 8 (see box A) could also be considered a Pillar two project, but WB has not provided any targets or evidence of what could be achieved with this project to be quantified and included in the calculation of the BCR and NPV.

⁴⁹ Jambeck et al (2015), ""Plastic waste inputs from land into the ocean"", Science, 347.

Supplementary Materials <https://science.sciencemag.org/content/sci/suppl/2015/02/11/347.6223.768.DC1/Jambeck.SM.pdf>

<https://science.sciencemag.org/content/suppl/2015/02/11/347.6223.768.DC1> , To calculate the figure per person , figure from the WB on population size is used.

evidence available on per person marine plastic pollution in lower income countries⁵⁰. Rather than 50kg provided by the WB, a 3kg estimate was used.

3. Quantified the ecosystem service benefits per tonne of reduced marine plastic (£472 and £4,725), based on a global estimates of the economic costs of marine plastic.⁵¹ A sixth of these estimates are used to approximately reflect the difference in ecosystem valuation in developing countries.⁵² This is the key sensitivity impacting the figures and represents the range shown below for the BCR and NPV. The same assumptions are applied for ghost gear, which is believed to be a conservative estimate of the potential benefits considering the additional impacts of this type of marine plastic.
4. Assume that it takes 5 years for benefits to first materialise and the benefits of the investments will increase gradually after this point.
5. Calculated benefits for 30 years⁵³, 2021 base year prices, and discounted benefits and costs at 10%, following published guidance for ODA.

BOX A: Indicative projects used for value for money analysis

A set of eight indicative or stylised projects were proposed by the World Bank, the results from which have been used to assess the value for money of the options for investment. These projects were based on previous World Bank and PROBLUE investments and known pipeline possibilities:

1. **Fisheries:** management of access in artisanal fisheries (zoning, management planning, awareness raising) and voluntary collection of obsolete fishing gear at landing sites in artisanal fisheries (awareness raising, infrastructure for collection)
2. **Fisheries:** management of access to fisheries (improved vessel monitoring and reporting) and reduction in use of obsolete fishing gear (through innovative incentive scheme and training)
3. **Coastal infrastructure:** voluntary collection of obsolete fishing (awareness raising, infrastructure to collect AFLDG, testing of incentive scheme) and improved enforcement (training of officials)
4. **Peri-urban solid waste management:** access to household waste collection (improved coverage and construction of safe disposal) and test of recycling of plastics (economic activity through community involvement including training, purchase of equipment and business development service)
5. **Solid waste management:** access to household waste collection (increased collection network and increased profitability of private operators)
6. **Aquaculture:** improved production practices through extension (disease control) and access to input (brood stock) and innovative financing for processing and training on processing
7. **Pollution control and coastal tourism:** Household waste collection, community organization in plastics collection (beach cleaning through labor-intensive work scheme)
8. **Plastics:** reduction in plastic littering (awareness raising and behavior change)⁵⁴

⁵⁰ [Marine Litter Prevention](#), GIZ (2018)

⁵¹ [Global ecological, social and economic impacts of marine plastic](#), Beaumont et al (2019)

⁵² Although the difference in purchasing power parity is higher, a proportion of these ecosystem services are **global** public goods such as the bequest / option value of biodiversity – these should still be valued at UK prices. A smaller proportion of the global estimate is used here compared to analysis completed for the BPF Ocean Country Partnerships Programme (OCP) due to PROBLUE focusing more specifically on supporting Least developed economies and SIDs. In comparison, under OCP there was a greater mix of low- and upper-income economies taking part in the programme. This is a key uncertainty and sensitivity: work is ongoing to update and estimate the most appropriate values to use.

⁵³ Starting in 2021, using 2020 price year

⁵⁴ The World Bank did not include specific targets for Project 8 quoting lack of evidence to develop an estimate. Therefore project 8 is used only in the break-even analysis to create a realistic minimum but not in the calculations for BCR or NPV which isn't possible without a target.

Costs

The non-discounted, financial cost of this option is assumed to be £3.1m over one year to the UK government⁵⁵. It is assumed that the cost will be divided equally between indicative projects which focus on marine pollution; 4,5 and 7.⁵⁶

Beyond the costs to the UK government, there will be additional costs to other actors, including the time involved in making policy changes, investment in enforcement, investment in infrastructure prompted as a result of the improved monitoring and changes to behaviours. However, these decisions and the resulting costs will be *enabled* by the UK's investment and not as a direct requirement of the programme. We can assume that the partner country government and other actors will take their own decisions only where the benefits can be assumed to be greater than the costs.

Appraisal of costs and benefits

These proposed projects provide us with an illustrative overview of the benefits and costs of the investment in PROBLUE. Noting the uncertainties and gaps highlighted above, we estimate the partial Present Value of Benefits of £2.1m-£18.7m, Present Value Costs of £3.1m, **a Net Present Value of -£0.9m-£15.6m and a benefit cost ratio range from 0.7 – 6.1**. This means that given the low estimates of outcomes and monetise benefits this option would not be considered value for money. As described above, the range is based on assumptions of mismanaged waste, leaked plastic reduced and their associated monetised benefits.

The low end of the BCR range shows the portfolio of projects would not be value for money. Therefore we have considered what targets the WB would need to demonstrate to at least break even i.e. what level of outcomes would need to be achieved, in order for this investment to be value for money. To break-even using the example investment projects which focus on land-based solid waste management, 2,777 households would need to be connected to solid waste management services per project. This would equate to at least 7 tonnes of leaked plastics reduced annually per project. Modelling would suggest that this could be realistically achieved, given World Bank experience in household collection infrastructure and the conservative assumptions of 3kg per household. In short, PROBLUE would need to work with more households than they are currently aiming for to breakeven in a conservative scenario.

There are unavoidable challenges in appraising in advance a portfolio that is demand led by recipient countries and where there are limited evaluations of previous PROBLUE programmes to assess likelihood of outcomes and impacts. This is a partial BCR, not including benefits which have not been possible to monetise: additional health benefits and job generation associated with establishing a waste infrastructure or biodiversity benefits from reduced leaked plastics, with consideration of these, the full BCR would be higher. On the other hand, this BCR will be lower in the situations where further action is required by key stakeholders in country, or estimated and assumed benefits are not realised, lower than required to break even although assumed very unlikely given the already small levels. We have aimed to take conservative estimates where possible and have applied optimism bias to the benefits as relevant.

⁵⁵ Each project is assumed to cost £2.8m each over 5 years. In a one-year scenario HMG contributes only one year of spend. Splitting the costs equally over the 5 years would amount to £568,000 per project per year, but there are likely to be additional set-up and administration costs in the first year in order to achieve the 1/5th of the benefits as described above being it's the first year of work on the ground and will require some fixed costs.

Strategic Benefits for the UK

Beyond the estimated benefits to poverty and the marine environment, there are a number of strategic benefits of focusing on one pillar over one year, many which have implications for the 'real world' benefits which could be achieved. For example:

- Currently ~50% of PROBLUE's funding is targeted towards this area, which indicates significant political momentum for tackling this issue
- The pollution pillar strongly aligns with UK expertise and experience
- Investing a smaller amount would still secure the UK's seat at the Partnership Council for one year
- Delivery risk of our investment in PROBLUE is limited. It would allow the UK to establish a relationship with the Bank team without high financial commitments

Risks

There are a number of risks associated with the do minimum option:

- The UK would only have decision-making power on this individual theme, without being able to influence the three remaining interrelated Pillars: this option lacks the recognition that ocean issues are highly interconnected and the tackling of multiple stressors through carefully planned interventions is necessary
- Signalling a commitment for only one year, in only one Pillar, means the UK will have limited influence on the wider MDB agenda and direction of PROBLUE.
- This pillar has already received a large proportion of funding compared to the other pillars. Internationally, the focus on plastics is also significant. The additionality of the UK making a further investment in marine pollution, therefore, might be lower than taking a more open, opportunity led, approach.

The consideration of the balance of benefits and risks suggests that whilst the 'do minimum' option is acceptable, this is not the preferred option.

3.6.2 OPTION B - INVEST £6M IN YEAR ONE ACROSS THE FOUR PILLARS, WITH UP TO £25M ACROSS THE FOUR PILLARS OVER 5 YEARS

Under this option the UK will communicate its interest to provide £25m in funding over 5 years, across the four pillars. However, the UK would not provide all the funding upfront with £6m being committed for year one. The remaining funding being contingent on a successful annual review and value for money assessment of year one activities and proposed activities for year two to five.

The UK will agree with PROBLUE specific performance objectives to secure future funding, these could include targets on mobilised finance, dispersed finance and number of projects funded. Outcome level targets are not feasible within one year. The UK will work with PROBLUE to make the necessary changes for funding to continue over the following years. This will help reduce the risks and uncertainties regarding value for money in investing in PROBLUE.

This funding will be spread across programmes that fall across all four Pillars described in the Strategic Case. Therefore, this option would deliver the projects in Option A but also for sustainable aquaculture and blue economy.

Benefits

The UK's investment will address multiple threats to ocean, coastal and maritime economy. In addition to the benefits described under Option A, this option can ultimately be expected to **reduce poverty** and **improve the marine environment**, through the pathways related to the other three World Bank Pillars:

- Fisheries and aquaculture: Strengthen sustainable aquaculture practices that can increase vulnerable community incomes, through improved commercial viability and job creation in the long term. There is a specific focus on offsetting the short-term losses associated with overcapacity and sustainable management of fisheries, providing alternative livelihood opportunities and building the technical capacity and infrastructure to support the required aquaculture development for food security and livelihoods.⁵⁷
- Oceanic sectors: Improving the sustainability of coastal tourism to reduce marine pollution and degradation and its impact on communities' livelihoods, health, and longevity of the tourism industry.
- Integrated seascape management: Support governments in their blue economy roadmap to attract private investment to industries that need a healthy ocean to thrive such as tourism, fisheries, and ports. In addition to providing investment for natural infrastructure to build resilience and adapt to climate change. Through these activities this pillar will protect communities' livelihoods and marine biodiversity.
- The focus on PROBLUE is on producing frameworks, data, analysis, knowledge products and 'blueing' Bank operations. All these products are vital in building the enabling conditions to allow a productive and sustainable blue economy. However, this also means that monetisation and valuation is challenging and should be treated with extreme caution.

The quantitative appraisal focusses on the benefits associated with all the investment cases proposed by the World Bank found in Annex D and described briefly in Box A. To monetise these benefits, we have used the best available price and ecosystem benefit evidence.

Given this option includes Pillar two projects mentioned in Option A, the following assumptions remain the same as Option A:

1. Assume that it takes 5 years for benefits to first materialise.
2. Net GHG emissions reduced and leaked plastics assumptions.
3. Quantifying ecosystem benefits.
4. Calculated benefits for 30 years⁵⁸, 2021 base year prices, and discounted benefits and costs at 10%, following published guidance for ODA

The following assumptions have been made to reflect an investment over 5 years across the four Pillars.

1. UK invests £6m in year one and a further £19m over years two to five. It is assumed that potential projects will start at different times during the 5 years of funding provided.
2. Taken the outcomes from WB's example investments, they expect to support an estimated 30,000 households over 5 years with a £25m investment scenario, which using our estimates and assumptions over 95 tonnes of marine plastic reduced, more than 900tCO_{2eq} net emissions reduced and 800 tonnes of sustainable aquaculture produced. The benefits of the Pillar two programmes are proportionately greater than under option A but with the additional programmes for the other pillars, overall benefits are greater than proportional.

⁵⁷ This will also mean protecting marine and coastal ecosystems from damages by aquaculture expansion.

⁵⁸ Starting in 2021, using 2020 price year

3. For sustainable aquaculture, used published global aquaculture production value figures from FAO⁵⁹. Assumed the % of production that is from SIDS and LDCs: The World Bank reports top fish producing regions by species⁶⁰. Using these figures, we were able to understand the average price of aquaculture produced in key regions.
4. Assumed the benefit of sustainable aquaculture is the value of income from aquaculture preserved from sustainable practices: It is assumed that revenues are being lost due to unsustainable fishing practices. If these practices are improved, then revenue could be improved aquaculture. It is assumed that income could increase by an additional 50%-75%, equivalent to £520 - £780 per tonne of aquaculture.

Costs

The cost non-discounted, financial cost of this option is assumed to be £25m over 5 years to the UK government. For the illustrative appraisal, it is assumed that the cost will be divided equally between the example investment cases.

Beyond the costs to the UK government, there will be additional costs to other actors, including the time involved in making policy changes, investment in enforcement, investment in infrastructure prompted as a result of the improved monitoring and changes to behaviours. However, these decisions and the resulting costs will be *enabled* by the UK's investment and not as a direct requirement of the programme. We can assume that the partner country government and other actors will take their own decisions only where the benefits can be assumed to be greater than the costs.

Appraisal of costs and benefits

Given the lack of evidence to support the proposed outcomes of potential investments into PROBLUE, a break-even approach is used to demonstrate, what would need to be delivered for the benefits of investing to equal the costs.

We can combine the appraisal of the different investment projects proposed to provide an illustrative overview of the benefits and costs of the investment in PROBLUE. Noting the uncertainties and gaps highlighted above, we estimate the partial Present Value of Benefits of £53.9m-£138.9m, Present Value Costs of £21.1m, **a Net Present Value of £32.8m-£117.9m and an overall benefit cost ratio ranging from 2.6-6.6**. As described above, the range is based on assumptions provided by the World Bank of what the monetised benefits would be for this portfolio of programmes.

We have included an optimism bias within these assumptions but we additionally consider this in our break even analysis: i.e. what level of outcomes would need to be achieved, in order for this investment to be value for money.

To break-even the following would be required:

- For the solid waste management projects: An average of 15,249 households connected to solid waste management services per project, which could result in Net GHG emissions reducing by 349 tCO_{2eq.} per year and at least 35 tonnes of leaked plastics reduced per year. Modelling would suggest that this could be realistically achieved, given World Bank experience in household collection infrastructure and the conservative assumptions of 3kg per person.
- For projects including ghost gear: A decrease in 37 tonnes of ghost gear reduced per year. The general lack of evidence on ghost gear tonnages at a country level

⁵⁹ [The State of World Fisheries and Aquaculture](#), FAO (2018)

⁶⁰ [Fish to 2030: Prospects for Fisheries and Aquaculture](#), World Bank (2013)

means there was no evidence to allow us to compare this at a country level. However, this figure represents less than 0.01% of the ghost gear which is estimated to enter the ocean each year. Where the World Bank achieves systems change through the investment projects, we estimate that this level could be achieved.

- For the aquaculture project: An increase of 46 tonnes per year of sustainable aquaculture this figure is less than 0.008% of Bangladesh's entire aquaculture sector, van Duijn et al (2018)⁶¹ found that aquaculture production in Kenya in low productivity small ponds was 3.1t/ha/yr, suggesting a farming area of just 60ha is required for this output to be produced.
- Overall resulting in an average of 1,000 men and women in coastal areas with increased economic opportunities in traditional and/or new economic sectors.

PROBLUE would need to work with more households than they are currently aiming for to breakeven in a conservative scenario but based on the assumptions and evidence used in the appraisal it is considered likely that these breakeven outcomes would be met.

The comparison of these outcomes to current global or, where available, country outputs of for example aquaculture production, does provide some confidence that these outcomes should be achieved over the lifetime of the UK investment should the actual investments match the indicative portfolio. However, the uncertainty involved in the exact projects that will be funded does offer less certainty on specific outcomes. Whilst this does not change the overall VfM assessment it reinforces the importance of HMG and the World Bank taking a strong stance on monitoring, evaluation and learning for investments in future years.

Strategic benefits

Beyond the estimated benefits to poverty and the marine environment, there are a number of strategic benefits of signalling the intent to fund a **medium investment over 5 years across all four pillars**. Many of these strategic benefits any which have implications for the 'real world' benefits to the which could be achieved for the marine environment and poverty.

For example:

- This larger investment – with a signal to fund over 5 years – would result in significant influence and visibility for the UK⁶² in directing the four Pillars of the programme as well as the influence necessary to ensure that UK funding delivers value for money.⁶³ This in itself has enormous long-term impact, particularly in terms of influencing outcomes much beyond the lifetimes of the projects and programmes themselves.
- The UK would have significant influence and visibility in the direction of the whole fund, and influence on the wider MDB agenda for integrating nature into projects and decision-making.

Funding all four Pillars will:

- **spread the delivery and value for money risks** among multiple projects and outcomes
- **provide PROBLUE with flexibility to identify and act on opportunities** which provide the best value for money without being artificially constrained to a single pillar area

⁶¹ Reference: <https://edepot.wur.nl/467082>

⁶² This level of financing would mean the UK contributing ~20% of the annual budget for PROBLUE for FY21/22 (PROBLUE FY22/23) – the most of any donor currently (though other contributions are expected)

⁶³ As discussed in the strategic case, the UK would have the ability to set workplans and budgets directly, influencing the direction and activities of the overall PROBLUE budget (~\$150m USD).

- **Direct finance to those areas which are under-resourced and therefore increase additionality.** Pillar 2 (preventing and managing marine pollution) is the best-funded pillar, with ~50% of the total annual budget. The other three pillars are under-funded compared to Pillar 2. This gives the UK an opportunity to increase the leverage of its finance and to also increase additionality and influence in the other three pillars, where there is currently lower interest from other donors

Risks

There are a number of risks associated with this option:

- the level of finance compared to a currently limited pipeline of projects increases the risk of the UK paying in advance of need and PROBLUE having significant unspent finance on their books. This has been seen in other MDB sectoral investment funds.
- the UK will have limited control over how much is spent on each Pillar, which could result in the same issue as Option A (if too much goes to Pillar two which is already receiving the majority of funding)

3.6.3 OPTION C – INVEST OVER £10M EACH YEAR ACROSS THE FOUR PILLARS, WITH FURTHER INVESTMENTS OF £10M EACH 5 YEARS

This option represents the do maximum, it would require the UK to make an investment of £50m into PROBLUE over five years, with 5 equal investments of £10m per year. The investment would be made across all pillars, giving the management of PROBLUE the ability to allocate the finance in the most efficient way, but future years would remain subject to dispersal and other performance targets.

The benefits can be expected to be similar to those described under the preferred option; strengthened sustainable aquaculture which enhances community livelihoods and job opportunities, coastal tourism is made more sustainable, governments are supported in their blue economy roadmaps and attraction of private investment in the blue sector. The detailed linkages are described in option B. Although this fund remains opportunity driven and the exact operations are not completely clear at this stage. The greater the sum of money suggested under this option means that the exact opportunities and investment options are more unclear compared to the other options.

In addition to the quantitative benefits described this level of funding would provide the World Bank with security in funding and allow them to potentially target strategic longer term projects focused on delivery of transformational changes.

The quantitative appraisal focusses on the benefits associated with all the investment cases proposed by the World Bank found in Annex D. To monetise these benefits, we have used the best available ecosystem benefit evidence. To appraise the future programme with a partial BCR and partial NPV, we have used the same assumptions made in Option B and we assumed that an increase in spend would result in benefits increasing by the same proportion.

Costs

The cost non-discounted, financial cost of this option is assumed to be £50m over 5 years to the UK government. It is assumed that the cost will be divided equally between the example investment cases.

Beyond the costs to the UK government, there will be additional costs to other actors, including the time involved in making policy changes, investment in enforcement, investment in infrastructure prompted as a result of the improved monitoring and changes to behaviours.

However, these decisions and the resulting costs will be *enabled* by the UK's investment and not as a direct requirement of the programme. We can assume that the partner country government and other actors will take their own decisions only where the benefits can be assumed to be greater than the costs.

In addition to the quantitative benefits described this level of funding would provide the World Bank with security in funding and allow them to potentially target strategic longer-term projects focused on delivery of transformational changes.

Appraisal of costs and benefits

Given the lack of evidence to support the proposed outcomes of potential investments into PROBLUE, a break-even approach is used to demonstrate, what would need to be delivered for the benefits of investing to equal the costs.

We can combine the appraisal of the different investment cases proposed to provide an illustrative overview of the benefits and costs of the investment in PROBLUE. Noting the uncertainties and gaps highlighted above, we estimate the partial Present Value of Benefits of £107.8m-£277.9m, Present Value Costs of £41.7m, **a Net Present Value of £66.1m-£236.2m and an overall benefit cost ratio ranging from 2.6-6.7.**

We have included an optimism bias within these assumptions but we additionally consider this in our break even analysis : i.e. what level of outcomes would need to be achieved, in order for this investment to be value for money.

To break-even on the proposed projects that has an estimated cost of £50m:

For the solid waste management projects-

- An average of 33,282 households would need to be connected to solid waste management services per project.
- This could result in Net GHG emissions reducing on average by 760 tCO_{2eq.} per year and at least 76 tonnes of leaked plastics reduced per year.

For the projects involving ghost gear reduction-

- A decrease in 79 tonnes of ghost gear reduced per year,

For the aquaculture project-

- An increase of 99 tonnes per year of sustainable aquaculture,

Resulting in between 1,700-4,200 men and women in coastal areas with increased economic opportunities in traditional and/or new economic sectors.

Strategic Benefits for the UK

A commitment from the UK of £50m over five years would provide a very large boost to PROBLUE and indicate a strong belief in the fund by the UK. This would mean that the UK would likely have a large amount of influence and visibility within the fund – both from other donors perspectives but also recipient countries. It would also potentially give the UK leverage to influence wider MDB activities as a large amount of finance demonstrates a strong interest in the marine sector.

Risks

A large amount of finance brings a number of additional risks when compared to the alternative options:

- Investing across all four pillars does spread the delivery risk, however the level of finance compared to a currently limited pipeline of projects increases the risk of the UK paying in advance of need and PROBLUE having significant unspent finance on their books. This has been seen in other MDB sectoral investment funds
- Given the exposure that the UK would gain within PROBLUE with such a large investment we would need to be confident that sufficient resources were available to manage an effective relationship and ensure value for money in investment

3.7 ADDED VALUE LEVERAGE

Using UK finance to leverage additional funding into PROBLUE funded or co-funded projects can be important to success but also increase the impact of these projects beyond UK investments. PROBLUE measures their leverage as value of operations where PROBLUE has added value to the design and implementation of projects. This is different to the UK's approach to leverage measurement, where we focus on the additional finance leveraged as a result of our finance and involvement.

The FY20 annual report from PROBLUE suggests that funding of \$1 from PROBLUE added value to \$164 in lending operations.⁶⁴ Table takes the regional information from the PROBLUE annual report and added value by region to identify added value leverage ratios of between 32 and 382.

Table 2: Leverage of added value by region (PROBLUE FY20)⁶⁵

Region	PROBLUE Investment by region (£m)	Added value leverage (£m)	Added value leverage ratio
MENA	£1.5	£13.0	138
AFR	£6.2	£482.0	78
SAR	£2.9	£1,108.0	382
EAP	£18.8	£1,500.0	80
LAC	£3.7	£119.0	32
Total	£33.1	£3,422.0	103

The operations of PROBLUE – ‘blueing WB investments’ – make a leverage ratio (as the UK measures it) difficult to identify. Discussions with the Bank have suggested that they would consider recipient executed activities to have a 10:1 (UK measured) leverage ratio,⁶⁶ with PROBLUE mobilising finance from other multilateral trust funds. The ICF Global Climate Fund business case indicated that Climate Technology Fund had a leverage ratio of £2.80 for every £1 of public investment and the GCF was expected to achieve a 1.96 private leverage ratio and a 5.71 public finance ratio, based on the UK attribution methodology. Therefore, we might suggest that the 10:1 leverage ratio could be ambitious and are more likely to achieve around **5:1 leverage ratio**, however even this level of leverage is likely to provide value for money as for each pound invested by the UK a further five pounds are mobilised from other sources.

A higher leverage could be expected because PROBLUE as activities have primarily focused on planning and creating the enabling conditions to progress towards a sustainable blue economy, therefore requiring additional investments to achieve impacts. Therefore, the greater the investment the larger the added value leverage towards a sustainable blue economy.

⁶⁴ High confidence as calculated directly from current and future pipeline projects as reported in the annual review, although the World Bank often claims \$1:\$300 as described earlier in document.

⁶⁵ As reported in annual review. PROBLUE annual report

⁶⁶ Medium confidence, based on WB estimates and is towards the top end of funds such as the GCF.

3.8 MECHANISMS TO ENSURE VFM

There are a number of mechanisms through which the UK will work to ensure and monitor value for money within the investment:

1. Blue Planet Fund wide and PROBLUE specific Monitoring, Evaluation and Learning (MEL)
2. UK seat on the Partnership Council (and potential to chair)
3. Leverage to influence change across the MDBs

A logframe will be developed in collaboration with PROBLUE. It will include a defined set of outputs for the investment with specific indicators, which will allow progress to be monitored. PROBLUE's Monitoring and Evaluation (M&E) Plan outlines the structure and roadmap for how the programme will balance learning, accountability and programme management considerations. PROBLUE M&E is based on experience from a number of existing programmes and the World Bank Trust Fund guidelines for reporting on results. Monitoring will systemically collect data on specific indicators to provide visibility of progress and achievement of objectives. Evaluation is the process of determining the value and significance of PROBLUE, including relevance of objectives, efficacy, efficiency and sustainability of results. Evaluations are planned through Annual Reviews, the Mid-Term Review, and the Final Review.

The robust M&E plan developed by PROBLUE provides donors with oversight but it will not necessarily enable us to track individual UK pounds – these will be co-mingled with other donors funding. As a BPF investment the project will be guided by the BPF MEL framework (in development). This sets out how MEL activities will support the BPF to identify what impact it is achieving, which activities and approaches are working or not, help to assess the programme's vfm performance, and contribute to the global evidence base for intervention areas.

Beyond BPF and PROBLUE MEL processes, the UK will have a seat on the Partnership Council, where we will have sight and approval of all projects funded by PROBLUE, as well as sight of project reviews. The UK will also use its seat at the Partnership Council to enact a package of reform that integrates nature programming into MDBs, which will lead to increased VFM across other MDB investments.

3.9 CONCLUSION AND PREFERRED OPTION

The table and conclusion below summarise the key information from the short list appraisal.

3.9.1 OPTION A: A ONE-YEAR INVESTMENT OF £3.1M, TO FUND PROJECTS UNDER PILLAR TWO (MARINE POLLUTION)

For a total financial cost of £3.1m, this option can be ultimately expected to **reduce poverty and improve the marine environment, through changing financial incentives and investment decisions** relating to marine pollution. There are significant uncertainties in the quantification of these benefits, but illustrative analysis suggests that this option could lead to Net Present Value (NPV) of -£0.9m-£15.6m, with a Benefit Cost Ratio (BCR) of 0.7-6.1. The range in value for money estimates reflects the uncertainties in the analysis, as highlighted above.

Such a large range of BCRs makes it challenging to assess value for money of this investment. Additionally to account for further optimism bias, a 'break even' analysis has been estimated:

i.e. the outcomes which would need to be achieved in order for the benefits of this investment to be (more than) equal to the costs. As described above, the current evidence available allows us to cautiously assess that these outcomes are likely to be delivered, meaning that this investment would represent value for money.

A smaller investment reduces the consequences if the fund is not proven to be successful, but it lowers the potential UK influence in the development of this fund and the potential for transformative change through these pathways.

This is a less preferred option.

3.9.2 OPTION B: A 5- YEAR INVESTMENT OF £25M TO FUND PROJECTS ACROSS ALL FOUR PILLARS PROBLUE (INITIAL YEAR 1 INVESTMENT OF £6M AND FUNDING FOR FOLLOWING YEARS CONDITIONAL ON DELIVERY)

For a total financial cost of £25m, with an initial commitment of £6m, this option can be ultimately expected to **reduce poverty and improve the marine environment, through changing financial incentives and investment decisions** across the major ocean themes: fisheries and aquaculture, oceanic sectors, seascape management and marine pollution. There are significant uncertainties in the quantification of these benefits, but illustrative analysis suggests that this option could lead to the highest potential Net Present Value (NPV) £32.8m-£117.9m, with a Benefit Cost Ratio (BCR) of 2.6-6.6. The range in value for money estimates reflects the uncertainties in the analysis, as highlighted above.

Such a large range of BCRs makes it challenging to assess value for money of this investment. To address this, a 'break even' analysis has been estimated: i.e. the outcomes which would need to be achieved in order for the benefits of this investment to be (more than) equal to the costs. As described above, the current evidence available allows us to cautiously assess that these outcomes are likely to be delivered, meaning that this investment would represent value for money.

Investing in all four pillars allows the UK to have significant influence and visibility in the direction of the fund as a whole. Although the World Bank has a track record of similar financial work across other sectors, there are risks associated with a significant investment in a new fund which is in development: World Bank work across the ocean sectors has not yet been proven. This risk is mitigated by the approach chosen: Defra will commit initially for one year, with further investments conditional on delivery. **This is the preferred option.**

3.9.3 OPTION C: A FIVE-YEAR INVESTMENT OF UP TO £50M TO FUND ACROSS ALL FOUR PILLARS, WITH AN INITIAL YEAR 1 INVESTMENT OF INVEST OVER £10M

For a total financial cost of £50m, with an initial commitment of £10m in year one, this option can be ultimately expected to **reduce poverty and improve the marine environment, through substantial financing** across all major ocean pillars. There are significant uncertainties in the quantification of these benefits however. Illustrative analysis suggests that this option could lead to a potential a Net Present Value of £66.1m-£236.2m and an overall benefit cost ratio ranging from 2.6-6.7. The range in value for money estimates reflects the uncertainties in the analysis, as highlighted above. Given the wide range in NPV estimates, breakeven analysis was conducted and the minimum outcomes required for this investment do show that this option should provide value for money, but it may be more challenging to achieve that option B.

Whilst the strategic arguments for option B are similar to those in this option, the increased finance levels enhances potential UK influence and ability to set direction. It also sends an extremely powerful commitment to donors and recipient countries that ocean issues are vitally

important. However, this option is not without risks. Similar to the benefits the risks are also similar to option B but are at an enhanced level due to the increased level of funding. To mitigate these it is recommended that Defra initially commit to one year of funding, but even that (£10m) requires a higher risk appetite than other options. **This is the do maximum and least preferred option.**

3.9.4 CONCLUSION

Across the options, there are a range of benefit cost ratios reflecting the uncertainties and the range of benefit cost ratios across the investment. These benefit cost ratios can only be considered partial, since there are a number of benefits which have not been possible to monetise.

Although this will differ at an individual project level, as an overall assessment, Option B, with an investment over five years, is considered likely to have a greater *overall* benefit per pound, reflecting:

- The set up costs of many projects, meaning that the benefit per pound is higher for investments over multiple years compared to an investment for a single year
- The benefits associated with learning from activities in previous years

These benefits have not been possible to incorporate in the partial BCRs included below.

	Partial benefit cost ratios	Net Present Value	Wider benefits	Risks and challenges	Conclusion
Option 0: Do nothing	N/A	N/A	Can reassess after the delivery phase has been established, the societal impact of PROBLUE and potential of a VfM investment.	Blue economy continues to be underfunded, creating ongoing risks to poverty through, fish stock depletion, marine pollution, and lack of adaptation plans. Could miss the opportunity to influence the direction of PROBLUE delivery.	Option discounted
Option A: A one-year investment of £3.5m, to fund projects under Pillar two (marine pollution)	0.7-6.1	-£0.9m-£15.6m	After one year we can assess the value for money to continue investing in PROBLUE projects based on projects, evidence, and investment by other countries (influence).	Lower certainty the UK will be able to influence projects with just one year funding. Missed opportunity to tackle other underfunded marine issues that PROBLUE covers.	Less preferred option
Option B:	2.6-6.6	£32.8m-£117.9m	Greater influence on projects due to commitment over	If other countries commit larger funding it could	Preferred Option

A 5- year investment of up to £25m to fund projects across all four Pillars PROBLUE, with an initial year 1 investment of £6m and funding for following years conditional on delivery			a longer time period (assuming year one successes) Potential to influence projects from beginning to end.	reduce UK influence but would mean greater levels of impact of PROBLUE.	
Option C: A five year investment of > £25m up to £50m to fund across all four Pillars, with an initial year 1 investment of Invest over £10m	2.6-6.7	£66.1m- £236.2m	Makes the UK the largest donor and increases our profile and leverage and influence within PROBLUE and WB. Provides surety in funding to WB and allows them to progress more strategic projects.	Delivery risk could be significant as currently the pipeline is underdeveloped compared to £50m funding.	Do maximum option, least preferred

4. COMMERCIAL CASE

NB. THE COMMERCIAL CASE REQUIRES APPROVAL BY DEFRA GROUP COMMERCIALS BOARDS PRIOR TO RELEASE.

4.1 COMMERCIAL APPROACH

4.1.1 COMPETENCY OF DELIVERY ORGANISATION

This business case seeks to recommend a direct contribution to the World Bank's PROBLUE programme. PROBLUE is a multilateral trust fund within the Bank that focuses on blue finance, which therefore represents an opportunity to leverage funding at a global level.

PROBLUE is anticipated to run for a minimum of five years, becoming operational part way through the World Bank's 2019 FY (1 July 2018 – 30 July 2019). The aim is to achieve integrated and sustainable economic development in healthy oceans. PROBLUE works to achieve these objectives through the management of several trust funds. The flagship fund, the multi-donor trust fund, is the fund Defra is seeking to contribute towards.

Since its launch PROBLUE has received USD \$111,237,339 in pledged contributions of which USD \$55,960,877 has been received from 11 donor countries. The donor countries are:

1. Australia
2. Canada

3. Denmark
4. European Commission
5. France
6. Germany
7. Iceland
8. Ireland
9. Norway
10. Sweden
11. US

The PROBLUE FYE (30 June 2020) report describes significant growth in FY20/21. The below table summarises the number of active projects and funding issued.

Table 3: PROBLUE growth FY19/20

Year	Number of projects approved	Value of approved projects (USD)
2019 (part year)	5	\$2,060,000
2020	48	\$40,597,00

The World Bank has an established strong track record of delivery. Data held in the Government Grant Information System (GGIS) shows that between January 2014 and April 2019 a total of 232 grants representing £3.558 billion (3 sig fig) have been awarded to the World Bank Group. These grants covered a wide range of subject matters including health care, research, disaster recovery, agriculture programmes, trade integration etc. No performance issues or concerns have been logged within GGIS regarding the World Banks prior performance.

Defra group Commercial (DgC) is therefore satisfied the World Bank has the required competence to administer the fund.

The Defra policy team have been sighted on PROBLUE's pipeline. The policy team is in full agreement with PROBLUE objectives, it is in line with the Theory of Change for the Blue Planet Fund and by investing into the Fund, the UK will gain important influence through a seat on the Partnership Council.

4.1.2 ALTERNATIVE OPTIONS

Alternative options have been considered in the appraisal case. A range of potential organisations have been appraised for funding by the policy directorate's economists. The policy directorates economists have applied HMGs established evaluation criteria for aid contributions.

The commercial approach to this requirement focuses on due diligence, structuring of the agreement and risk management.

4.2 ENSURING VALUE FOR MONEY THROUGH PROCUREMENT

The funding mechanism for this scheme will be via a direct contribution.

4.2.1 DUE DILIGENCE

An assessment of the World Bank against Defra Group Commercial's due diligence check list has been completed. In addition, an enhanced due diligence report focused on Safeguarding conducted by FCDO (then DFID) has been shared with us,⁶⁷ whose overall assessment found the World Bank 'in terms of its overall central policies and procedures meets DFID's safeguarding standards, with a satisfactory rating in all six of the categories of this assessment. This reinforces the 'green' rating assigned to the WB by DFID in response to their return to the SoS' letter requesting assurances in March 2018.

As described within section 4.1, GGIS data has highlighted a strong track record of the World Bank's performance of having managed 232 grants from UK Government Departments, which representing £3.558 billion (3 sig fig) in funding. Past funding from UK Government Departments to the World Bank have focused on a diverse range of issues such as climate change, healthcare and world hunger programmes. Past funding has spanned multiple years across a variety of geographical landscapes. A clear ability on the part of the World Bank to manage this fund has been established.

4.3 GOVERNANCE & FINANCIAL MANAGEMENT

4.3.1 MANAGEMENT OF THE FUND

PROBLUE's highest governance structure is the Partnership Council. The Secretariat to the Partnership Council is the World Bank, and the Chair revolves between donors. Representatives from each donor country sit on the Council. Whilst Defra cannot dictate where monies are allocated once the contribution has been made, the UK will exercise its influence by virtue of membership of the Partnership Council. The UK will also seek to become Chair of the Council, which will increase the level of influence over the PROBLUE agenda.

The Partnership Council allocates funding in the following manner:

1. PROBLUE drafts a proposed workplan and budgets for review by the Council. This workplan reflects the needs of both donors and client/recipient countries
2. The Partnership Council discusses and endorses the final workstreams and allocated budgets

As described within section 4.1, the World Bank has shared a draft pipeline of planned funding activity for FY21/22. Defra is content that the planned activities will meet Defra's expectations and contribute strongly to the BPF Theory of Change, with no issues envisaged.

4.3.2 AGREEMENT TERMS

The World Bank operate to a standard model form set of terms and conditions referred to as the Administration Agreement (AA).

DgC has reviewed the AA and is satisfied that the AA is commercially acceptable. The AA has met Defra's expectations regarding how the scheme will be managed, i.e. PROBLUE will be managed by the Partnership Council with Defra exercising its full influence over how the fund will be managed.

4.6 STATE AID

⁶⁷ The report is too big to embed here - please make a separate request if you would like more detail from the report

Advice from Defra’s subsidy control unit has been sought. In summary the subsidy control unit have approved the scheme.



FW_ SUBSIDY ASSESSMENT FOR Oapproval - World Ba



RE UK subsidy

4.7 COMMERCIAL RISKS

Risk	Probability	Impact	RAG	Mitigation
World Bank does not spend monies correctly	Low	High	Green	Accept and monitor. Defra will monitor World Bank’s reports and actively participate in the Partnership Council. Contractual remedies (e.g. Audits and withholding of funding) exist should misuse be suspected
Cannot attribute funding to specific outcomes	Certain	Low	Green	Accept and monitor. Defra is contributing to a multi-donor trust fund – it is therefore not possible to link donor funding to specific projects. The World Bank will be contractually required to publish an annual report describing how monies have been spent and what projects have been funded
Limited control over how monies are spent	Certain	Low	Green	Accept and monitor. Whilst Defra cannot directly specify exact programming, Defra will use its influence at the Partnership Council to direct funding towards programming and activities that align with the BPF

5. FINANCIAL CASE

5.1 NATURE AND VALUE OF THE EXPECTED COSTS

5.1.1 NATURE AND VALUE

The BPF will contribute £25 million into PROBLUE over the lifetime of the fund (at time of writing this is five years) The investment will be entirely ODA funded; the first £6m was of this sum confirmed for FY2021/22 (Year 1) via SR20. We will aim to secure funding, for both programme and staffing costs, for the subsequent four years through future Spending Reviews. **Any potential subsequent funding will be subject to performance reviews, and to the successful delivery of agreed objectives.** The investment will be made in the form of a contribution agreement to the World Bank, who will coordinate delivery of the programme.

It is anticipated that this programme will be 100% RDEL because the programme expenditure is not to buy assets. Programme expenditure is targeted towards the creation of knowledge products, knowledge transfer, creation of toolkits and data sets, and guidance and recommendations for policy and regulatory reform.

5.1.2 PROBLUE BUDGETS

Table 4: PROBLUE indicative budget (FY22/23, US\$)

Region	Bank-Executed Trust Fund	Recipient-Executed Trust Fund	Total
Global	\$3,200,000		\$3,200,000
Africa	\$5,500,000	\$5,000,000	\$10,500,000
East Asia & Pacific	\$6,600,000	\$10,000,000	\$16,600,000
Europe & Central Asia	\$500,000	-	\$500,000
Latin America & Caribbean	\$5,200,000	-	\$5,200,000
Middle East & North Africa	\$2,100,000	-	\$2,100,000
South Asia	\$5,100,000	-	\$5,100,000
Program Management and Administration /Comms/Knowledge Management	-	-	\$1,250,000
Technical Support	-	-	\$1,400,000
Total	\$28,200,000	\$15,000,000	\$45,850,000

Table 5 : Proposed FY22 Total Budget by Pillar (US\$)

Pillar (including integration)	BETF	RETF
Pillar 1	\$6,500,000	\$5,000,000
Pillar 2	\$10,200,000	\$5,000,000
Pillar 3	\$5,000,000	
Pillar 4	\$6,500,000	\$5,000,000
Program Total	\$28,200,000	\$15,000,000

5.2 ACCOUNTING OFFICER TESTS

The primary accounting office tests have been considered throughout the development of this business case:

- **Regularity:** the project will be managed in accordance with HMT's Managing Public Money guidance and in line with the Defra ODA guidance. Legal powers are in place through the International Development (Official Development Assistance Target) Act 2015. This project meets the ODA requirement that the activity must promote the economic development and welfare of developing countries as its main objective.
- **Propriety:** ODA funding will be allocated under Section 1 of the International Development Act 2002 and expenditure will be in accordance with this legislation and all ODA requirements. The project will not breach any parliamentary control procedures or expectations, Defra Board governance structures will be followed which are guided by the Corporate Governance Code. Additionally, payment in advance has HMT approval for this project.
- **Value for Money:** the recommended approach has been appraised carefully against alternative options, including doing nothing and alternative funding mechanisms and delivery approaches.
- **Feasibility:** the need for this investment has been explored fully in the strategic case; final assessments state that investments can be realistically implemented and delivered within the proposed timeframe. The delivery partner is an experienced World

Bank body and has well established processes in place to provide assurance that the programme will be delivered as intended.

- **Affordability:** the first year of this investment has been formally agreed by the Foreign Secretary, with allocated budget from financial year 2021/22. Subsequent investment will be delivered subject to successful SR submissions and subsequent agreement of future budgets

5.3 SCHEDULE OF FUNDING / COSTS (I.E. HIGH-LEVEL BUDGET)

5.3.1 PAYMENT SCHEDULE

The proposed payment schedule is shown in table 6.

Table 6: indicative payment schedule

Financial year	Programme RDEL	Delivery partner admin fee
2021/22	£6m	No more than 11%
2022/23	£4.25m	No more than 11%
2023/24	£4.25m	No more than 11%
2024/25	£4.25m	No more than 11%
2025/26	£4.25	No more than 11%
Grand total	£25m	

5.3.2 HMG FRONT-LINE DELIVERY COSTS

Based on 4% FLD as bid for in ODA review, FLD costs for Y1 would total £240,000. Within HMG, managing the UK's contribution, as well as influencing and participating in key decisions, will require the below staff dedication (Full Time Equivalent (FTE)). Defra has sufficient Front-Line Delivery (FLD) resources under the current SR to fund staffing cost for this project budget.

Table 7: Front-line delivery costs

Grade	DEFRA
G6	0.1 x £88,645 (London)
G7	0.1 x £75,216 (London)
G7	0.1 x £65,724
SEO	0.3 x £56,826 (London)
Total	£40,006.30

5.3.3 ADMINISTRATIVE COSTS

The World Bank charges fees based on fee structure as agreed within the contract between HMG and the World Bank. This has been budgeted and will be included within the £6m contribution for this year, as well as any subsequent years of funding.

5.4 FINANCIAL ACCOUNTING CONSIDERATIONS FOR DEFRA

Research activities are minimal, and whilst there will be an inherent component of R&D to be able to inform courses of action, this is not the focus of the programme. This programme brings visibility to innovative solutions to leveraging private finance into the sustainable blue economy but does not directly focus on innovation-based research and development in this area. We have been advised that it does not meet ESA10 requirements.

5.5 MONITORING, REPORTING AND ACCOUNTING FOR EXPENDITURE

5.5.1 MONITORING, REPORTING AND ACCOUNTING

Overall performance will also be measured yearly through an annual review which is scored and can be used to take remedial action against poor performance.

We require annual audited and quarterly unaudited financial reports, which will be detailed in the contribution agreement. Table 8 below indicates when reports will be required.

Table 8: financial reporting

Document	Lead	Description	Form	Cycle	Deadline
Financial report	PROBLUE programme lead	Quarterly report on spend	Tbc	FY21/22	December 2021 March 2022
External financial audit	PROBLUE programme lead	Final financial review	Tbc	FY21/22	April 2022

5.5.2 PAYMENT IN ADVANCE OF NEED

In line with HMT's guide on Managing Public Money, we will ensure that **Defra is not paying in advance of need**. The UK's will provide funding as an annual contribution. The UK's funding is then co-mingled and committed towards specific activities. Once those activities have been completed, the funds are disbursed.

5.6 FINANCIAL MANAGEMENT

All PROBLUE donors are expected to sign a contribution agreement, the standard World Bank Administrative Agreement. All implementing partners are required to undertake financial annual statements, as agreed upon in the legal agreements co-signed by the World Bank.

On the investment side, the Fund's Secretariat will conduct all financial reporting on their investment portfolio. The World Bank will produce financial reports annually, which will be made public. Implementing partners will provide narrative reports every six months. Formal annual reports from each implementing partner will be combined and presented to the Partnership Council.

There are no expected accrued costs, leftover funds or interest as a result of this investment. The investment will be paid out in Pounds Sterling and transferred into US Dollars by the delivery partner, therefore there is no financial risk due to fluctuating exchange rates on our side.

5.7 FINANCIAL AND FRAUD RISK ASSESSMENT

In line with ODA guidance, Defra expects all organisations to have a zero-tolerance approach to fraud and corruption; acting immediately if it is found, working with authorities to bring perpetrators to account and pursuing aggressive loss recovery approaches. Therefore, we require the World Bank to have systems in place to detect and combat fraud. These systems are in place and include the World Bank’s ‘Guidelines for preventing and combating fraud and corruption in projects financed by International Bank for Reconstruction and Development loans and International Development Association credits and grants’. These guidelines set out the general principles, sanctions and requirements applicable to all which receive, are responsible for the deposit or transfer of, or take or influence decisions regarding the use of, such funds. There is also the World Bank ‘Staff Rule 8.01 - Disciplinary Proceedings’, which governs disciplinary proceedings, and the associated reporting, investigative and decision-making process, arising from allegations of misconduct relating to fraud and corruption.

Implementing partners are responsible for familiarising themselves with risks of fraud, corruption and other contextual and programmatic hazards as identified by the World Bank. Implementing partners are expected to be proactive in reporting risks to the PROBLUE programme team. Standard World Bank procedures and operational arrangements are in place set out in the MoU with the Bank, donors, implementing partners and any other stakeholders, which include fraud, corruption, and any other abuses of power.

5.8 PROVISIONS FOR DEFRA TO WITHDRAW FUNDING

The scenarios of potential suspension of funding, termination and returns to Defra and how they might be triggered, including by the monitoring and reporting cycle, are as follows:

Scenario	Timing and reporting trigger (if relevant)
Occurrence of any illegal or corrupt practice	Annual Reviews (by Defra), monthly updates (from the delivery partner)
<p>“Extraordinary circumstances that seriously jeopardise the implementation, operation or purpose of the programme”</p> <p>This is primarily designed to cover instances of force majeure. We assess this may also provide some cover in extreme cases of under-delivery.</p>	Annual Reviews (by Defra), monthly updates (from the delivery partner)
“If the World Bank does not fulfill its commitments according to the cooperation contract”	At the time if/when this happens or if identified as part of annual and monthly reporting, annual reviews, independent evaluations at mid-term points

HMT APPROVAL

As a Tier 1 programme, HMT approval will be sought for this Business Case.

6. MANAGEMENT CASE

6.1 MANAGEMENT AND GOVERNANCE ARRANGEMENTS

PROBLUE is established as a Multi-Donor Trust Fund (MDTF) by the World Bank. The MDTF is administered by the World Bank in accordance with the applicable Bank policies and procedures. The team of Bank staff focused on supporting the various PROBLUE pillars will

collaborate with the relevant global networks and practices, as well as Bank regional and country teams, and other relevant departments within the World Bank.

A Partnership Council (PC) has been established to manage PROBLUE. The Council (a) provides strategic guidance and direction on the implementation of the Trust Fund activities and endorses strategic priorities; (b) endorses annual work plans and budgets presented by the World Bank; and (c) reviews progress reports provided by the World Bank based on the results framework. The PC meets (bi)annually, as convened by the World Bank. The Bank may agree to hold ad hoc meetings of the PC at the request of a PC member.

6.1.1 ROLES, RESPONSIBILITIES AND ACCOUNTABILITIES: DEFRA

Overall responsibility lies with the Senior Responsible Owner (SRO), currently the Director of Marine and Fisheries.

The day-to-day management of this project will be undertaken by Defra's designated BPF project lead for PROBLUE, who will be responsible for routine oversight of this investment. Progress will be formally monitored monthly via meetings between the Defra project lead and the relevant PROBLUE World Bank representative, and informally monitored via email correspondence for the duration of the investment. Monthly meetings will cover the following as a standard:

- general update on progress
- delivery against programme objectives and budgets
- delivery against BPF objectives, ToC and impact statement
- delivery against agreed timelines
- programme issues and risks

BPF Programme Board

The Defra project lead will be required to report at least once every two months to the BPF Programme Board, which has oversight at working level of all BPF investments. There will also be requirements to update the BPF Joint (Defra-FCDO) Management Board on a quarterly basis and other internal boards (e.g. Marine & Fisheries programme board) if/when required.

BPF Joint Management Board

PROBLUE performance against BPF KPIs will also be reported to the Joint Management Board. The Joint Management Board provides strategic oversight over the BPF, and some of its core functions include:

- monitoring delivery progress of BPF investments and their business cases
- managing risks, assumptions, issues and dependencies and escalate risks and issues affecting the timely completion of the business case/project
- discussing and planning how to address cross-cutting risks and issues
- allocating resources effectively in order to ensure complementarity and fit with Theory of Change

This board complements the existing boards but differs from some of these forums by being focused exclusively on Defra BPF investments.

ODA Board

The role of an ODA board is to provide accountability and assurance for Defra's ODA budget and to provide strategic direction for Defra's ODA spend. The ODA board meets quarterly and consists of Senior Civil servants from FCDO and Defra. Within Defra, the ODA Board has a remit to:

- monitor the strategic direction for ODA spend in Defra
- monitor the implementation of Defra's ODA strategy and policy priorities
- clear Business Cases for ODA spend above £5 million
- monitor progress against the results set out in business case
- monitor and advising on significant risks to implementation
- recommend remedial actions to the SRO if operational or financial performance is off track
- ensure ODA rules are met
- ensure consistency with x-Whitehall ODA rules

Investment and Portfolio Committee⁶⁸

Chaired by FCDO at Deputy Director level, and to meet quarterly. The group will provide oversight of the overall ICF portfolio including thematic delivery plans; programming; policy development, influencing and investments.

Partnership Council

Defra will also attend the (bi)annual PROBLUE Partnership Council and influence the overall strategic direction and annual workplan for the programme, which includes setting the budgets and activities under each pillar for each financial year.

Ministers

Updates will also be provided to the Minister as appropriate.

Knowledge sharing

Knowledge will be shared internally within Defra to all relevant teams. This will be done via existing regular catch ups, as well as dedicated sessions as and when appropriate.

6.1.2 ROLES, RESPONSIBILITIES AND ACCOUNTABILITIES: WORLD BANK

The World Bank provides the day-to-day management of PROBLUE and the UK investment on the multi-donor trust fund side. The designated PROBLUE representative will report to the Defra project lead on a monthly basis (see above).

Partnership Council

As Secretariat, the World Bank is responsible for convening and supporting the Partnership Council. The Council sets the overall strategic direction for PROBLUE, including guidance on strategy, objectives, plans, and programmes. The Council currently is made up of nine donors (Australia, Canada, Denmark, the European Commission, France, Germany, Iceland, Ireland, Norway, Sweden and the US) who shape and endorse the annual workplan and budget.

Knowledge-sharing

⁶⁸ This Committee has not yet been set up and is subject to change

To effectively share knowledge associated with the various PROBLUE outputs and outcomes, the PROBLUE management team uses various means to enable broad access to PROBLUE resources, information on programme activities, approved Strategy Notes, and other materials requiring broad dissemination. The World Bank may also use other global and regional platforms and networks for this purpose.

6.2 MONITORING, EVALUATION AND LEARNING

6.2.1 MONITORING, EVALUATION AND LEARNING

All Defra ODA programmes are designed to ensure that Defra ODA Monitoring and Evaluation activities are consistent with the requirements of the UK International Development Act 2015, while maximising opportunities for learning and providing accountability.

A logframe will be developed in collaboration with PROBLUE, detailing a defined set of outputs for the investment with specific indicators, which will allow progress to be monitored. PROBLUE's Monitoring and Evaluation (M&E) Plan outlines the structure and roadmap for how the program will balance learning, accountability and program management considerations. The M&E plan has five specific objectives:

1. to facilitate results measurement and reporting to development partners
2. to help identify problem areas and propose corrective measures
3. to provide input for the mid-term and final reviews
4. to describe data for progress measurement and their sources
5. to ensure alignment between the results documents and the Annual Work Plan and the Annual Report

Results are expected in fisheries and aquaculture, marine pollution management, shipping and transport (including desalination), offshore energy and in coastal tourism. The programme will also strengthen the enabling environment for the blue economy and contribute to cross-cutting issues related to gender equality, climate change and mobilising finance for development. Assessment of progress through indicators focuses on the five sectors and the cross-cutting issues and synergies between the sectors. The four pillars will not be measured separately.

Monitoring and evaluation of the programme is based on experience from a number of existing programmes and the World Bank Trust Fund guidelines for reporting on results. Monitoring will systemically collect data on specific indicators to provide visibility of progress and achievement of objectives. Evaluation is the process of determining the value and significance of PROBLUE, including relevance of objectives, efficacy, efficiency and sustainability of results. Evaluations are planned through Annual Reviews, the Mid-Term Review, and the Final Review.

6.2.2 REPORTING

Key Performance Indicators

All BPF projects and programmes will be required to report against at least one BPF Key Performance Indicator (KPI), but ideally all relevant BPF KPIs. The KPIs are designed to reflect the BPF theory of change and the key poverty reduction and environmental conservation aims of the fund. BPF KPIs which mirror ICF KPIs already have agreed and published methods and these will be the first to be reported on.

It is likely that this project will be monitored against the following BPF KPIs, including all relevant ICF KPIs:

- Volume of finance mobilised for purposes which match BPF objectives (ICF KPIs 11 & 12)
- Number of people, as a result of BPF finance, with improved outcomes: i) income; ii) ability to cope with the effects of climate change; iii) climate resilience; iv) food security and nutrition; v) waste management (ICF KPIs 1 & 2)
- Number of marine-related evidence, knowledge dissemination and education activities or products developed as a result of BPF finance
- Number of new or strengthened policies, strategies or regulations related to improving or managing the marine environment
- Net change in greenhouse gas emissions– tonnes of GHG emissions reduced or avoided as a result of BPF finance (ICF KPI 6)
- Area of marine ecosystems protected, enhanced or under sustainable management practices as a result of BPF projects
- Amount of waste averted from entering the marine environment and losses avoided in marine-related value chains as a result of BPF intervention

Annual Reviews

Programme progress will be reviewed annually at the Partnership Council meetings and through the annual review. PROBLUE emphasises result-based management and measuring. This approach includes the Theory of Change and the Results Framework and provides an accountability trail towards development partners and the World Bank. It is based on assumptions and expectations of causality and linearity and provides a clear line of sight in strategy and planning. It ensures the PROBLUE Secretariat and development partners carefully consider how to make decisions on providing funding, and how to evaluate what works and does not work.

Mid-Term Review

Although not required in the Administrative Agreements, one mid-term review is proposed during the programme period. With the aim to assess progress against objectives and to identify issues, lessons learned and recommend changes, the mid-term review findings may lead to revisions to implementation arrangements, ToC and results frameworks, partnerships, etc. Key areas to be covered in the mid-term review are:

- continued relevance of the programme
- effectiveness and achievement of outcomes
- efficiency and Value for Money
- network/linkages of stakeholders and beneficiaries
- lessons learnt and needed revisions to the programme

Final Review

At completion of the programme, a final report will be produced following the World Bank's Trust Fund guidelines. This review is retrospective and broadly has the same content as the Annual Reviews and mid- term reviews.

6.3 WHAT ARE THE KEY RISKS AND HOW WILL THEY BE MANAGED?

Risks for this investment have been identified in the table below. A full risk register will be used to monitor project delivery, and risks will be managed in accordance with HMG guidance and reported to the BPF Programme Board. The project lead is responsible for updating the risk register, ensuring the mitigating actions are carried out. The SRO has overall responsibility for all the risks identified in the risk register. When appropriate, risks will be escalated to the BPF Joint Management Board and/or the ODA Board.

Risk description & category	Likelihood	Impact	RAG	Comments/Mitigating Actions
Financial: The UK's contribution is ~20% of PROBLUE's overall budget for FY21/22. This means that the UK takes on a large share of the delivery risks within the programme	High	Medium		With a contribution of ~20% of PROBLUE's budget for FY21/22, the UK will have a lower ability to spread risk across donors and across a wider range of projects. To mitigate this risk, Defra will work with the PROBLUE team to develop a robust logframe that aligns with the BPF investment criteria. PROBLUE also has its own investment criteria for projects, which provides the Secretariat with a framework against which to assess project viability and value for money. This framework helps to ensure that funding goes to the right projects, which in turn minimises the risk of taking on unfeasible projects that could result in delivery failure.
Operational (delivery): COVID-19 causes delays to project, as activities cannot go ahead as planned. The project misses log frame targets, underspends, and is unable to deliver expected results over the lifetime of the project	Medium	Medium		The World Bank has experience of delivering activities during major global crises, including COVID-19. The Bank has put in place contingency plans to mitigate the impacts of Covid-19; the PROBLUE team continues to monitor the situation and consider the most effective ways to provide support for clients and beneficiaries. As part of this effort, a rapid response note was prepared and circulated to the PROBLUE Development Partners, laying out options for targeted grants intended to address and remedy the devastating impacts of the pandemic on coastal communities. Beyond these options for rapid response, PROBLUE resources will continue to be deployed, as originally intended, but with a greater focus on activities that support job creation and coastal health.
External (political): Political instability prevents the Bank from delivering effectively (or delays parts of the project)	Low	Medium		Since the focus of PROBLUE is LDCs and SIDS, programming will inherently have some element of this risk. Political instability is not currently perceived as a likely risk to operations, and the Bank has a strong track record in delivering in unstable and fragile states. The Bank's country offices will play a key role in monitoring potential political volatility and advising the PROBLUE team on the most effective mitigation measures.
Financial: Corruption either by government, NGOs or third parties contracted by PROBLUE which would result in a misuse of funds	Low	Medium		The Bank has extensive experience in working in countries with high levels of bribery, fraud and corruption. The Bank has stringent rules and frameworks in place to mitigate this risk and ensure that delivery and programming is not compromised. Defra's close monitoring of the project through established meetings and reports will also enable us to monitor and mitigate this risk if needed.

External (environmental): Natural disasters, extreme climatic events and hazards slow down or prevent implementation of initiatives and jeopardise the effectiveness of projects	Low	Medium		Environmental risks are factored into programming and will be monitored by PROBLUE and Defra throughout the lifetime of the project. Whilst risk cannot be prevented, resources and activities could be repurposed or redirected if this were to occur. This risk is most relevant for SIDS and some LDCs, such as Bangladesh and Mozambique.
Strategic/business (management): Low resources and capacity in Defra's BPF team results in governance delays and hinders ability of PROBLUE to deliver	Medium	Medium		Once Front-Line Delivery resources for 2021/22 are finalised the likelihood and impact of this risk will be clearer. At present, there is sufficient capacity within the BPF team to manage this investment. Although we expect that management of PROBLUE will not be as resource-intensive as other investments, managing multilateral investments requires a rigorous approach.. This will be mitigated in part by the degree of flexibility afforded by the Bank to donors, which should prevent serious delays that would have major impacts on programming.
Operational (delivery): Due to the investment start date of November, there is a risk that the compressed timeline for delivery will result in PROBLUE not being able to conduct all activities by the end of the financial year, resulting in a negative impact on Defra's spending and budget	Low	High		The World Bank provides detailed annual work plans and budgets to donors. With a seat at the Partnership Council, the UK will be able to feed into annual workplans and budgets, and influence to target high investment/value activities if needed. Funding will be then be allocated once the workplan has been endorsed at the Partnership Council, which takes place annually. Additionally, the World Bank's financial year runs from 1 July – 30 June. This provides an additional three months in which the Bank delivers stated activities and disburses funds.
Operational (delivery): Limited control over where and how UK funding is spent, including funding pillars with activities that do not directly or fully fall within Defra's remit (decarbonising shipping, desalination, and "blueing" ports) and go beyond the remit of the programme	Medium	High		With a seat at the Partnership Council, the UK will have some influence over how and where funds are spent. The amount of funding invested broadly corresponds to the amount of influence within PROBLUE (the UK will fund ~20% of this year's annual budget). Influence could also be greatly increased if the UK becomes Chair of the Council. Although investment will come after the Partnership Council meeting in May, the UK will be given donor status at the time of the meeting in anticipation/advance of the UK's contribution.
Reputational/financial: Difficulty in directly being able to attribute every £ to specific activities and outcomes (a common feature of multilateral funds)	High	High		UK funding will be co-mingled with other donors'. The Bank will provide regular financial reporting on delivery against the annual workplan, and will include PROBLUE contributions, expenditures and other data points from which the UK can extract attribution metrics. During the annual review the Bank will be asked to submit a full list of donors and their current committed contributions, this data will be compared to the UK contribution to assess the relative attribution of current results to UK finance. The UK will be able to mitigate reputational risks through the attribution metrics, as well as demonstrating value added because of the Bank's wider leveraging abilities (i.e. that each £ goes far beyond its original value). We will also have a strong MEL strategy in place through the wider BPF framework to identify results from UK finance and a transparent methodology for attributing those results. Estimated attribution has already been calculated in the appraisal case. Additionally, UK will also need to communicate clearly the benefits of multi-donor investments, primarily in that they are able to achieve and leverage the necessary scale of finance in a way that other methods of funding simply cannot.

<p>Reputational/operational: safeguarding issues arise that necessitate a pause or ending of the programme, and that cause damage to the UK's reputation</p>	<p>LOW</p>	<p>Medium</p>	<p>The World Bank has rigorous policy and procedures to ensure that the correct safeguarding measures are in place. This includes guiding borrowers in the assessment of bidders' responsiveness and competence to comply with specific Sexual Exploitation and Abuse (SEA)- and Sexual Harassment (SH)-related obligations during the bid evaluation process. They also set clear expectations in contract conditions by stipulating obligations to manage Gender-Based Violence (GBV)/SEA-SH risks that are within the contractors' control. Enhanced procurement documents provide clear, strong basis for borrowers to prevent, mitigate and manage SEA-SH risks and exercise appropriate remedies.</p> <p>The Bank is also the first MDB to implement measures which ensure that contractors and subcontractors who don't comply will not receive further Bank-financed contracts anywhere in the world for a period of two years.</p>
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6.4 AVOIDING FRAUD AND CORRUPTION

The World Bank Group's approach to fighting corruption combines a proactive policy of anticipating and managing risks in its own projects. The Bank Group subjects all potential projects to rigorous scrutiny and works with clients to reduce possible corruption risks that have been identified. The Bank Group's independent Sanctions System includes the Integrity Vice Presidency, which is responsible for investigating allegations of fraud and corruption in World Bank-funded projects. Public complaint mechanisms are built into projects to encourage and empower oversight, and projects are actively supervised during implementation.

When allegations of fraud and corruption are substantiated, companies involved in misconduct are debarred from engaging in any new World Bank Group-financed activity. Concerned governments receive the findings of World Bank Group investigations. To date, the World Bank Group has publicly debarred or otherwise sanctioned more than 1,000 firms and individuals.

In fiscal year 2020, the World Bank Group debarred or otherwise sanctioned 49 firms and individuals and recognized 72 cross-debarments from other multilateral development banks. At the end of fiscal year 2020, 372 entities have been sanctioned with conditional release, a process by which firms are afforded the opportunity to improve their internal compliance programs as part of their sanction.

The World Bank Group has multiple guidelines for fraud and corruption. For specific details, please see the following:

- [Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants](#)
- [Guidelines on Preventing and Combatting Fraud and Corruption in Program-for-Results Financing](#)
- [Sanctions, Proceedings Settlements in Bank Financed Projects](#)

6.5 TRANSPARENCY

Defra requires all its partners to meet the *International Aid Transparency Initiative (IATI)* standard⁶⁹ that aims to ensure that organisations publish information to 'improve the coordination, accountability and effectiveness to maximise their impact on the world's poorest and most vulnerable people'. This includes information on the organisation, funds, and planned activities. This intervention will generate significant outputs including log frames, annual reviews, programme/project proposals and technical reports which will be of interest to other countries and stakeholders. The UK government will work to ensure that all outputs are published on IATI, free to users whenever possible.

Defra also uploads relevant programme outputs to the UK Development Tracker.⁷⁰

6.6 SAFEGUARDING, GENDER AND EQUALITY

6.6.1 SAFEGUARDING

The World Bank meets FCDO's (formerly DFID) standards regarding safeguarding and holds a "green" rating in FCDO's Enhanced Safeguarding Review. It has safeguarding policies in place for staff, which lists Sexual Exploitation, Abuse and Harassment (SEAH) as a form of misconduct, including a rule prohibiting staff from engaging in SEAH, which was included in

⁶⁹ <https://iatistandard.org/en/>

⁷⁰ <https://devtracker.fcdo.gov.uk/>

the Staff Rules in April 2018 and was communicated to all World Bank staff. These policies will be strengthened further through their Action Plan for Preventing and Addressing Sexual Harassment. The Bank has a register of internal safeguarding issues and now reports to the Board with disaggregated data on sexual harassment. It has a new Environmental and Social Framework (ESF), and standards set out in procurement documents, which require downstream partners to adhere to high standards of conduct and identify and manage risks to beneficiaries. This is being strengthened in response to the recommendations of the Global Gender Based Violence Task Force and the associated Gender Based Violence Action Plan. It also has a Chief Ethics Officer and Inspection Panel which reports to management and the Board and it provides mandatory training on the Code of Conduct and on sexual harassment in the workplace as part of staff induction processes.

6.6.2 GENDER AND EQUALITY

Blue Planet Fund

The BPF is committed to considering and incorporating the role, equality and inclusion of gender throughout our programming. All programmes funded through the BPF will be required to deliver in line with relevant UK legislation, such as the UK International Development (Gender Equality) Act 2014. Gender has been integrated into the design of the fund through the following:

- **cross-cutting themes:** gender is one of the cross-cutting themes of the BPF – it is integrated into the underpinning outcomes that steer the direction of the programmes
- **BPF equality, diversity and inclusion (EDI) strategy:** sets out the BPF approach to ensuring that we include a mixed portfolio where EDI is mainstreamed throughout, as well as including programmes where EDI is specifically targeted;
- **investment criteria:** the BPF will only invest in programmes that meet the required criteria.
- **MEL:** the BPF has designed fund-level indicators disaggregated to provide information on gender, such as number of projects or planning and/or governance processes with increased inclusion of local people and knowledge in decision making to improve the marine environment. Mid- and end-of-programme reports will investigate the potential impacts of the intervention on gender through targeted studies

PROBLUE

Within the Blue Economy and World Bank Group Gender Strategy 2016-2023, focus on the M&E of gender-related issues will help client and task teams to identify strategic opportunities to narrow gender gaps taking an intersectional approach, e.g. gaps between males and females; or gaps among groups of females or males, such as between poor and non-poor women, or girls and young women and adult women, or urban and rural men, and women and girls with disabilities or other vulnerabilities. These are integrated into PROBLUE-funded activities: proposals for funding need to articulate a ToC with strong gender gap analysis, actions, and indicators to measure progress in closing the gender gap. The following key areas of the blue economy should be considered in all activities:

- understanding the roles and relations of men and women
- recognition of structural (institutional, legal, social norms/cultural norms etc.), educational disadvantages that women and girls face
- identification of inequality (unequal access to natural resources, unequal access to land tenure and other assets (access to finance, access to technical assistance, access to equal wages and adequate labour conditions, domestic burden (cooking cleaning etc.), and time use, childcare and others)

- identification of gender differentiated impacts of marine litter and pollution, including in the management of marine litter and chemicals
- identification of measures and activities to address inequalities (policies, capacity building, awareness raising, access to finance, services, resources, wages, labour conditions, tenure, rights; legal and regulatory framework; other)
- identification of gender-based violence, analysis of gender-based violence, factors contributing to gender-based violence, and the presence of adequate referral pathways for survivors
- promotion of the equal participation of women by making decision-making bodies more representative of stakeholders
- consulting with informally established women working groups and women's rights organisations and understanding and recognising where they wish to formally recognised

Gender Indicators

PROBLUE will report on the following gender indicators:

- Men and women in coastal areas with increased economic opportunities in traditional and/or new economic sectors (number), of which women (%)
- Men and women in coastal areas aware of gender issues, economic opportunities and related risks (number), of which women (%)
- Men and women participating in planning and decision-making on the Blue Economy (number), of which women (%)
- Gender-based violence prevention and response practices in relation to the Blue Economy (number) (disaggregated by home; workplace)
- Women's rights organisations consulted and involved in seascape planning (number)

ANNEX A: BLUE PLANET FUND BACKGROUND

Identifying we are now at a pivotal moment, the 2019 Conservative Manifesto formally committed to “*establish a new £500 million Blue Planet Fund to help protect our oceans from plastic pollution, warming sea temperatures and overfishing*”⁷¹. Reflecting the value of the ocean to the development agenda, the Conservative Party earlier stated that this would be “resourced from the International Aid budget”.⁷²

Recognising, the indivisible link between ocean health and its effect on poverty alleviation and the sustainable development prospects of the world’s most disadvantaged communities, the Blue Planet Fund (BPF) will ‘*protect and enhance marine ecosystems through the sustainable management of ocean resources, to reduce poverty in developing countries*’.

Based on evidence from the World Bank⁷³, reports by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), the Biodiversity and Sustainable Development Advisory Council’s report into UK ODA and the High Level Panel for a Sustainable Ocean Economy, we have identified four key themes that underpin this overarching impact. A specific outcome has been agreed under each theme:

- Biodiversity - *Improved **marine biodiversity** and livelihoods by protecting and enhancing marine ecosystems, reducing pressures and increasing resilience, and enabling sustainable and equitable access to, and use of, these resources.*
- Climate change - *Improved resilience, adaptation to and mitigation of **climate change**, particularly through enabling and investing in inclusive nature-based solutions.*
- Marine pollution - ***Marine pollution** reduced through action on land-based and sea-based sources that also contributes to improved livelihoods and healthier environments.*
- Sustainable Seafood - ***Seafood** produced and distributed in ways which support healthy ecosystems, do not overexploit marine stocks, provide sustainable inclusive and equitable livelihoods and enhance resilience to climate and socioeconomic shocks.*

⁷¹ [Conservative Manifesto \(2019\)](#)

⁷² [Vote Blue, Go Green](#), Conservatives news article (2019)

⁷³ [Oceans: Sector Results Profile](#), World Bank Group

ANNEX B: PROBLUE PILLARS (DETAILED)

PILLAR 1: FISHERIES AND AQUACULTURE

Fisheries remain a major focus of ocean policy in many countries, with the sector being integral to food security and providing valuable jobs for the very poor. PROBLUE aims to tackle key challenges within the sector: lack of job security, weak governance and lack of regulatory reform, low levels of food and nutrition, and inconsistent and unreliable streams of revenue. The aim of this pillar is to help recipient countries make well-informed, evidence-based fisheries management decisions. These decisions should take into consideration the contributions and needs of small-scale fishers and their communities, and clearly communicate the impacts that improved fisheries management are expected to have on them. In recognition of the global crisis that plagues fisheries worldwide, one of the main priorities under PROBLUE is to help countries cover the inevitable costs that will arise from moving to sustainable approaches. This cost will include a much-needed reduction in overcapacity, which cannot be borne by the small-scale fishermen who rank amongst the poorest in the world. PROBLUE's work on capture fisheries seeks to combine social protection with fisheries management and to meet the broader needs of fisheries-dependent households, with the long-term goal of helping to diversify income sources in coastal communities.

Climate resilience within fisheries is also a priority area, with the World Bank modelling a variety of scenarios for the future of fish. To improve fishers' resilience to climate-related shocks, PROBLUE supports country-level work in order to develop a quantitative understanding of this issue, and to recommend the most promising climate adaptation strategies and investments for coastal communities.⁷⁴ In the Philippines, for example, PROBLUE supports the fisheries and climate resilience agenda by helping to identify those fishing communities that are most at risk from climate change, and develop resilience strategies that include coastal protection through nature-based solutions, along with targeted vulnerability assessments in fishing communities for the development of insurance tools. PROBLUE also supports a major initiative in Indonesia that combines focus on coastal fisheries (mostly small-scale and artisanal), health of coastal ecosystems (mangroves and coral reefs), and comprehensive and rigorous modelling of both ecological and socio-ecological impacts of climate change on fisheries. This innovative model was developed two years ago by the Bank, in cooperation with some of the best modelers who had worked on the IPCC report on oceans and the cryosphere and applied to the African continent as a whole.⁷⁵

Aquaculture continues to be another important growth sector in the ocean economy and forms the other, complementary half of this pillar. In some parts of the world and for certain species, aquaculture has expanded at the expense of natural environment (for example, shrimp aquaculture and mangrove cover) or under technology with high input requirements from capture fisheries (for example, fishmeal).⁷⁶ PROBLUE programming explores solutions for issues of commercial viability, job creation and technology to enhance the contribution of aquaculture to a blue economy. PROBLUE identifies areas of investment such as production and associated support infrastructure, incentives, financial services, promotion outreach and communication, and technical and institutional capacity. For example, PROBLUE is working with the Indian government to strengthen their "blue revolution" agenda, which focuses on greatly expanding aquaculture production across the country. PROBLUE is supporting the development of institutional capacities and systems for increased resilience, efficiency, productivity and seafood safety in the fisheries and aquaculture sector.

⁷⁴ [PROBLUE: 2020 Annual Report](#), World Bank Group (2020)

⁷⁵ [Climate Change and Marine Fisheries in Africa : Assessing Vulnerability and Strengthening Adaptation Capacity](#), World Bank Group (2019)

⁷⁶ [Fish to 2030: Prospect for Fisheries and Aquaculture](#), World Bank Group (2013)

PILLAR 2: PREVENTING AND MANAGING MARINE POLLUTION

Marine pollution is PROBLUE's best funded pillar, with ~50% of the programme's total funding. Due to the demand-led nature of programming, the current focus under this pillar is plastic pollution (with increasing demand on microplastics). There is also an increasing demand for looking into other sources of marine pollution, including port and ship-based pollution, as well as marine pollution from agriculture run-off.

With its global reach, PROBLUE has the ability to provide financing to countries and to support interventions at every stage of the plastic life cycle, from both the public and private angle. PROBLUE's global strategy for this is twofold: fill the gaps on evidence and methodologies and develop decision-making tools to help countries and practitioners to design effective, efficient and implementable projects, policies and packages of interventions to prevent plastic pollution. On the latter strand, the PROBLUE team developed the concept for a *Marine Plastics and Microplastics Knowledge & Innovation Platform*. The platform (and associated knowledge products) will be finalised and rolled out in FY22, with two main objectives: firstly, to fill one of the major gaps in plastic and microplastic pollution prevention. And secondly, to develop and disseminate knowledge products to help countries address critical development challenges. Examples of such challenges, which will be addressed through knowledge products to be completed in FY22, include: gender inclusion on plastic circularity; impacts from COVID-19 and opportunities to rebuild without plastic pollution; guidelines and policy note on microplastics; and plastics in agriculture and food systems.

On the former strand, PROBLUE works across multiple issues (examples below). A key priority is to support countries to understand the sources, pathways, impacts of marine litter and plastics, either by conducting baseline assessments, collecting key data through national inventories, policy analysis, or providing technical assistance to countries to build their capacity and help them develop roadmaps and action-plans, and meet their commitments around marine plastics. In addition to data collection, PROBLUE advises on how to implement the necessary policy reforms and identify investments needs to implement the solutions. Some of the critical gaps in data have been identified and will be filled, either at national level or globally, around the following themes:

- **chemical complexity and diversity of materials in plastic:** informing the development of standards in plastic materials, making them simpler or more recyclable, along the lines of one of the main principles of circularity, namely “designing out waste and pollution”. PROBLUE will tackle this issue from a private sector perspective (e.g., through privately led initiatives on social plastics), as well as from a public sector angle. In addition, more work will be undertaken to demonstrate the economic feasibility of recycling solutions, in order to de-risk this sector and make it more attractive for private investment. PROBLUE is working with International Finance Corporation (IFC) to explore pilot project(s) that can be developed to test new business models and/or technologies to scale-up recycling solutions that divert otherwise ocean-bound plastic into the value chains of manufacturing or consumer companies
- **post-consumer plastic waste utilisation:** looking into the various existing use of post-consumer plastics and post-consumer products; discuss impacts, risks, standards, technologies, and costs of alternatives; and make recommendations on production, use and dismantling processes including waste pre-treatment and use of chemicals in the recycling processes, both in terms of high-level technical considerations as well as for necessary regulatory interventions
- **extended producer responsibility mechanisms in low- and middle-income countries:** many countries have started to introduce some level of producer responsibility to ensure a transition to a more circular economy. Few successful and socially inclusive systems are in place, however, even in high income countries

- **Abandoned, lost, discarded fishing gear (ALDFG):** marine plastic pollution also comes from marine sources. To that end, PROBLUE is starting to support countries' efforts to address ALDFG, and will develop a framework for engagement to bring this ad hoc support to scale

PROBLUE drives this work at both national and regional level. In Thailand, Malaysia, Pakistan and Vietnam, PROBLUE works jointly with the IFC to support mapping of plastic waste and plastic value chains to identify and implement policies and public and private investments. In India, the focus is to support states and cities in strengthening the waste management and disposal systems, enhancing resource efficiency through minimising waste whilst bolstering diversion activities, and developing an ecosystem for adopting circular approaches in plastic life cycle. At the regional level in Western Africa, PROBLUE is working to build the knowledge base in countries like Senegal, Nigeria, Ghana and Sierra Leone to foster regional cooperation by building on the national engagements.

This focus on marine pollution has played a catalytic role in providing opportunities to engage in other, related sectors, such as tourism. In Sierra Leone, for example, PROBLUE aims to bring transformational change to the tourism sector by developing guidelines in support of the circular economy. In Ghana and Nigeria, PROBLUE engagement is multisectoral, focusing on job opportunities and identifying investments needs in the waste sector and beyond, and how to de-risk investments also for private sector. In the East coast of Africa, PROBLUE is engaged in Mozambique and Tanzania. In Mozambique, the engagement covers the whole Blue Economy with a strong focus on addressing the drivers of marine plastics, increasing knowledge base and supporting innovation. In Tanzania and Zanzibar, the engagement focuses on coastal zones and how they are impacted by pollution as well as erosion. Similarly, PROBLUE supports efforts to understand the levers that can be developed to prevent agricultural pollution impacting the seas and oceanic sectors. Building on existing work in four countries in East Asia, PROBLUE will expand globally and assess economic impacts of agricultural pollution on oceanic sectors in other regions

PILLAR 3: OCEANIC SECTORS

PROBLUE's work on blueing oceanic sectors focuses on ensuring that the development of oceanic sectors (and the growth that can come from such developments) does not come at the expense of ocean health or the coastal communities that rely on marine resources. The focus areas are: sustainable coastal tourism (with a focus on the recovery agenda), decarbonisation of maritime transport, environmental and social aspects of offshore wind, and desalination. To that end, PROBLUE's initial efforts under the third pillar have so far been targeted at four main economic sectors:

- improved shipping, through development of blue ports and decarbonisation of shipping
 - closing knowledge gaps to enable and accelerate effective climate policy-making
 - mobilising shipping stakeholders to develop joint institutional, technical, and financial solutions for low-/zero-carbon shipping
 - helping client countries to seize related business opportunities
 - strengthening the World Bank's global leadership role in terms of climate action and sustainable transportation
- offshore wind energy development
 - preparation of global knowledge products to analyse the key issues and provide examples of good practice,
 - geospatial planning to identify potential zones for initial offshore wind development
 - commissioning of a building footprints mapping exercise in OpenStreetMap (OSM) of coastal communities in up to five priority countries

- obtaining existing client-owned data to support the geospatial analysis
- commissioning and procurement of existing global or national data to support the geospatial analysis
- support for preparation of scope of work and funding applications for downstream environmental and social work by country teams
- means to improve the sustainability of coastal tourism
 - focus on West Africa (the Gambia, Sao Tome Principe and Cabo Verde) and insular Caribbean
- environmental aspects of desalination

So far PROBLUE support has focused mainly on the global analytical work that is needed upstream to ensure that best practices are picked up at the national level on difficult technical issues. FY21 saw significant progress and the completion of several global analytical pieces with key findings - the focus on FY22 will be to operationalise these findings and build a bankable pipeline of projects in client countries.

FY21 has also focused on global work in the tourism sector, with a focus on the recovery of the sector to ensure that its recovery is sustainable. The High-Level Panel for a Sustainable Ocean Economy has identified a clear need for deeper work in tourism in SIDS, so this will be a focus in Pillar 3 in FY22. The study on the economic impacts of MPAs on local economies (from tourism) was completed in FY21 and found clear benefits to the economy from MPAs in the two case study areas. This work will be expanded to various locations in FY22, to help build the economic case for more protected areas in client countries.

PILLAR 4: INTEGRATED SEASCAPE MANAGEMENT

PROBLUE's work on integrated seascape management focuses not just on environmental perspectives but also the socio-economic elements. The Blue Economy Development Framework (BEDF), developed under PROBLUE, provides a structure under which various policy analyses, capacity assessments, planning tools and financing instruments are organised to help countries design a blue economy roadmap unique to their needs. The Framework consists of three core components, namely: (i) knowledge management; (ii) policy, institutional and fiscal reforms, and (iii) fostering investment in the blue economy. A suite of tools have subsequently been developed in support of the BEDF, to enable client countries to design and implement strategies for blue growth, tailored to their particular circumstances. Having initially piloted the BEDF in three countries, lessons from these activities have led to a broader understanding of the use of the BEDF toolkit to develop seascape management. As a result, PROBLUE has observed an increased interest in and uptake of the BEDF, and support has expanded from the original three pilots to 12 countries across regions – including in Tanzania, Jamaica, Peru, Ecuador and in Central America. BEDF efforts include different diagnostic analyses and tools to inform the development of a blue economy, including natural capital accounting, socio-economic assessments and blue financing schemes (including payment for ecosystem services and private-sector engagement) as well as institutional, regulatory and fiscal assessments, supporting the development of comprehensive blue-economy strategies and linking to marine spatial planning to ensure sustainable allocation and use of marine resources and space.

Framework activities have already been undertaken or are under way in India, Kiribati and Vietnam. UK resources can be expected to provide additional support to Salvador and Honduras, Ecuador, Jamaica, Namibia, Mexico and Costa Rica, who have all approached PROBLUE for support in implementing a similar approach. The framework is also designed to attract investment in sectors such as tourism, fisheries and ports and shipping that drives equitable and climate-smart economic growth in healthy oceans. PROBLUE funding will also be directed towards integrating blue natural capital into national wealth accounting, which supports other UK priorities, initiatives and strategies in this area. A draft Blue Public

Expenditure Review Guidance Note has been completed and peer-reviewed and is being taken up by Bank teams as they analyse key institutions related to blue sectors as part of upstream work or project preparation (including in Central America, Indonesia, and Jamaica). In addition to this work continuing in a number of countries in FY22, PROBLUE is initiating a collaborative effort with the Finance and Markets team, to identify sustainable and replicable blue financing instruments. This initiative will build on the World Bank report “Mobilising Private Finance for Nature”, where monetising cash flows from the provision of ecosystem services (financing green) and driving better management of biodiversity risks (greening finance), have been identified as two key channels for private finance mobilisation. Options considered include coastal-ecosystem insurance instruments to enhance climate resilience and restore biodiversity and ecosystem services (financing green/blue) and financing schemes for transitioning to a decarbonized shipping industry (greening/blueing finance).

With the overarching Framework established and pilot projects under way supported by foundational tools developed by PROBLUE, the programme will expand its focus on marine spatial planning (MSP) in FY22. Concretely, several countries that have benefited from Blue Economy Development Framework support are now deepening their commitment around MSP, including in Central America, Jamaica, Morocco, Tanzania, Maldives, Vietnam and Indonesia. MSP is a key tool for unlocking the potential of multiple sectors, and greatly fosters integration across different sectors. Not only does MSP help preserve essential ecosystem services, but it also creates the certainty investors depend upon in order to unlock access to marine resources and areas in a sustainable manner. The Bank’s existing geographic information system (GIS) platform will be used as a foundation to develop a specific MSP platform, which will provide users with access to a suite of tools, some of which are already available, while others will be developed by PROBLUE. First among those are those on offshore energy, nature-based solutions, water desalination and NDCs, as well as an MSP monitoring and evaluation tool. In this instance, innovative approaches developed in Pillar 4 are being deployed in the oceanic sectors covered by Pillar 3. This work will be complemented by policy guidance on how to bring blue natural capital accounting and economics into MSP. This study will review existing country natural capital accounting case studies in Fiji and Indonesia for lessons learned in the policy arena and help Bank teams and clients build economic valuation into MSP. This work will help identify policy gaps, provide policy recommendations linked to investments, including around the issue of subsidies, and produce a training module for both technical and non-technical practitioners.

Nature-based solutions (NbS) are another key element of the Blue Economy Development Framework, providing a powerful investment vehicle for delivering more resilient infrastructure for disaster risk reduction, water resource management, and more resilient energy and transport, whilst also addressing livelihoods, biodiversity, and climate change. Global awareness, and demand from governments for NbS, is increasing rapidly. Building upon the NbS work done during the last three years by multiple Bank global programmes, PROBLUE will build a program to pool the Bank’s technical and institutional expertise on marine NBS to drive the integration of NbS across the Bank’s operational and analytical portfolio on coastal infrastructure. The “Blue NbS Programme” will support project preparation, produce knowledge products and provide capacity-building activities for task teams and government counterparts. Besides these global knowledge products, country level work will be undertaken, starting in The Gambia, Senegal, Ghana, India, Myanmar, Jamaica, and Haiti, among others.

In FY21, and with support from two of its development partners who are members of the High-Level Panel for a Sustainable Ocean Economy (HLP), PROBLUE has invited and received requests from support by other member states requiring technical and financial support. Working with the technical teams in the regions, PROBLUE is supporting client countries implement the recommendations of the HLP, particularly as they fully align with PROBLUE’s dual focus on integration and sustainability.

ANNEX C: FULL LIST OF PILLAR ACTIVITIES AND OUTCOMES

We expect that the overall impacts under the four pillars will achieve the following:

- countries supported in a post-Covid “blue” recovery and are better able to manage their marine resources sustainably
- countries have increased food and nutrition security, revenue security and job security
- countries develop and establish sustainable blue economies, lifting people from poverty and providing opportunities for alternative livelihoods
- livelihoods, biodiversity and climate change at the centre of government policy-making

Outcomes

Expected outcomes will vary according to pillar and will change according to donor priorities, national contexts and interests, workplans and budgets over the five years. Outcomes may include (but are not limited to):

Overall

- an increased supply of bankable pipeline projects, which in turn generates more interest, investment and demand from the public and private sectors for more projects
- increased public and private financial flows towards sustainable activities in fisheries, marine pollution and climate change adaptation and mitigation
- increased participation from women in project/programming planning and decision-making, and an increase in men and women’s equal economic opportunities in traditional and/or new economic sectors
- interventions specifically focused LEDCs and SIDS, thereby increasing the social, environmental, and economic benefits and opportunities of the world’s poorest and most vulnerable

Pillar 1: Fisheries and aquaculture

- better identification and design of operations for sustainable fisheries and aquaculture
- improved social protection, hygiene, and livelihoods for workers in fishery value chains
- increased and improved public expenditure for sustainable fisheries management
- fisheries under sustainable management in a number of countries
- improved monitoring, control and surveillance for successful and sustainable fisheries management
- governments supported in implementing WTO subsidy reforms, and shifting subsidies towards measures with positive social and ecological impacts
- strengthened monitoring, control and surveillance efforts in Africa to eventually enable the European Union to lift their “yellow cards”⁷⁷ on affected countries
- development and growth of the aquaculture market
- enhanced transparency and accountability in fisheries management and decision-making processes
- investment to support aquaculture as a means to contribute to poverty alleviation, nutrition and equitable growth

Pillar 2: Preventing and managing marine pollution

- development of more financially sustainable recycling markets
- countries supported in their transition to a circular economy
- the prevention and management of marine pollution and marine plastics through improved solid waste management, urban planning and circular economy
- raising the profile of microplastics pollution (an emerging priority area for recipient countries)

⁷⁷ Issued to countries for inadequate compliance with the EU’s Regulation to prevent, deter and eliminate illegal, unreported and unregulated fishing

- scale up of tackling the issue of agricultural pollution, from both nutrients run-off and plastics in agriculture
- an increase in regional capacity to tackle marine pollution and plastics in South Asia

Pillar 3: Blueing oceanic sectors

- increased sustainable coastal tourism (with a focus on the recovery agenda), with a focus on SIDS
- support to the transport sector to facilitate decarbonisation in maritime activities to put them on a pathway consistent with the Paris Agreement goals
- environmental and social aspects integrated into offshore wind development and associated activities
- development of the desalination agenda

Pillar 4: Integrated seascapes

- countries have the necessary tools to develop their blue economies according to their own particular needs
- investment into NbS incorporated into blue economy development plans, providing a powerful vehicle for delivering more resilient infrastructure for disaster risk reduction, water resources management, more resilient energy and transport, while also addressing livelihoods, biodiversity, and climate change
- sustainable and replicable blue financing instruments developed, which recipient countries are able to access

Activities

Pillar 1: fisheries and aquaculture

- Fisheries-Sector Assessment Toolkit⁷⁸ rollout, which will support more effective and successful fisheries projects
- best practice guidelines for economic and environmental sustainability in aqua-business development
- development of an Aquabusiness Advisory Platform, which will identify aquaculture technologies, best practices and business models, products and markets, and required policy reforms to empower private-sector investment
- developing a pipeline of bankable investments in the aquaculture sector
- investments in Liberia in Sierra Leone to support agencies in the fisheries sector to conduct vessel-monitoring analyses for better-informed policy recommendations on fishing effort and for making data publicly available
- supporting countries in Africa to update and/or finalise respective National Action Plans to combat Illegal, Unregulated and Unreported (IUU) fishing
- assessing the impact of fisheries-policy reform (such as a reduction in fishing effort) on local value chains and local employment – including for women in terms of processing and trading
- support the preparation of a fisheries and Blue Economy investment in Somalia focused on improving fisheries statistics, management and port infrastructure
- developing and piloting applications for collecting catch and fishing-effort data in coastal fisheries in the Pacific
- aiding Pacific countries in the inclusion of climate change considerations in national fisheries management and sustainable development plans, as well as the inclusion of fisheries management and development into cross-sectoral climate adaptation planning

⁷⁸ The toolkit was developed in FY20, with the aim of providing Bank Task Teams and clients countries with a set of practical tools to help generate the knowledge required for designing, implementing and evaluating projects for capture fisheries for concrete, sustainable outcomes

- ➔ monitoring relevant safety-at-sea activities to create a baseline in support of the next phase of the Pacific Regional Oceanscape Program
- ➔ in-depth diagnostics of the current status of the fisheries sector in and the policy and legal frameworks in the Pacific. Diagnostics work will help to identify the gaps and opportunities for enhancing the sector's contribution to revenue generation and food and nutrition security, and determine key reforms and investments needed
- ➔ Fisheries Public Expenditure Reviews in South Asia

Pillar 2: preventing and managing marine pollution

- ➔ roll out of the tools and methodologies developed in the global flagship work *Pathways Out of Plastic Pollution* to 14 countries globally. The work will identify opportunities for job creation along the plastic value chain, set targets for the reduction and substitution of plastic items, and replicate the effects of policy reforms to create viable incentives for households, private sector and governments to address plastic pollution at each stage of the value chain, in line with the principles of a circular economy
- ➔ scale up support to analytics along the entire plastics lifecycle, from solid waste management to plastic circularity, increasing the focus on private sector and unlocking barriers for investments
- ➔ engage with the transport sector on port reception facilities to develop guidance on of Abandoned, Lost or Otherwise Discarded fishing gear (ALDFG)
- ➔ finalise FY21 case studies on agricultural run-off and nutrients
- ➔ begin analytical work in South Asia (initially) on the role of plastics along the agriculture value chains, exploring the link between plastics and food safety
- ➔ continued activities in Africa to prevent marine pollution and plastic pollution, spanning across the whole spectrum of interventions, from municipal solid waste and urban planning to circular economy. Activities will focus on identifying or preparing operations that will ultimately prevent marine pollution and plastics or will continue filling knowledge gaps and scale up activities initiated during a first phase of work
- ➔ technical assistance for project preparation and analytical work that underpin policy reforms in East Asia and the Pacific
- ➔ technical assistance to support the development and/or implementation of action plans in East Asia and the Pacific
- ➔ strategic regional support in East Asia and the Pacific to advance solutions with a public goods dimension and to enable action at the country level (e.g. the standardisation of materials, including in support to innovative new materials and alternative to single-use plastics)
- ➔ diagnostics of microplastics in rivers in East Asia and the Pacific
- ➔ end-of-life microplastics capture in wastewater and exploring ways to prevent it in East Asia and the Pacific
- ➔ investment into a solid waste management project in Kerala State in India, combining investments in infrastructure and in policy reforms, informed by assessments and policy analysis on waste and circular economy
- ➔ technical assistance for solid waste management and circular economy in South Asia (likely India, Pakistan, and Bangladesh) – activities will range across all levels of governance, from municipal to state and national level
- ➔ capacity-building of regional institutions in South Asia (e.g., South Asia Co-operative Environment Programme)

Pillar 3: Blueing oceanic sectors

- ➔ enhance the analytics on the prospects of zero-carbon shipping from phase I, and develop institutional, technical, and financial solutions for zero-carbon maritime transport

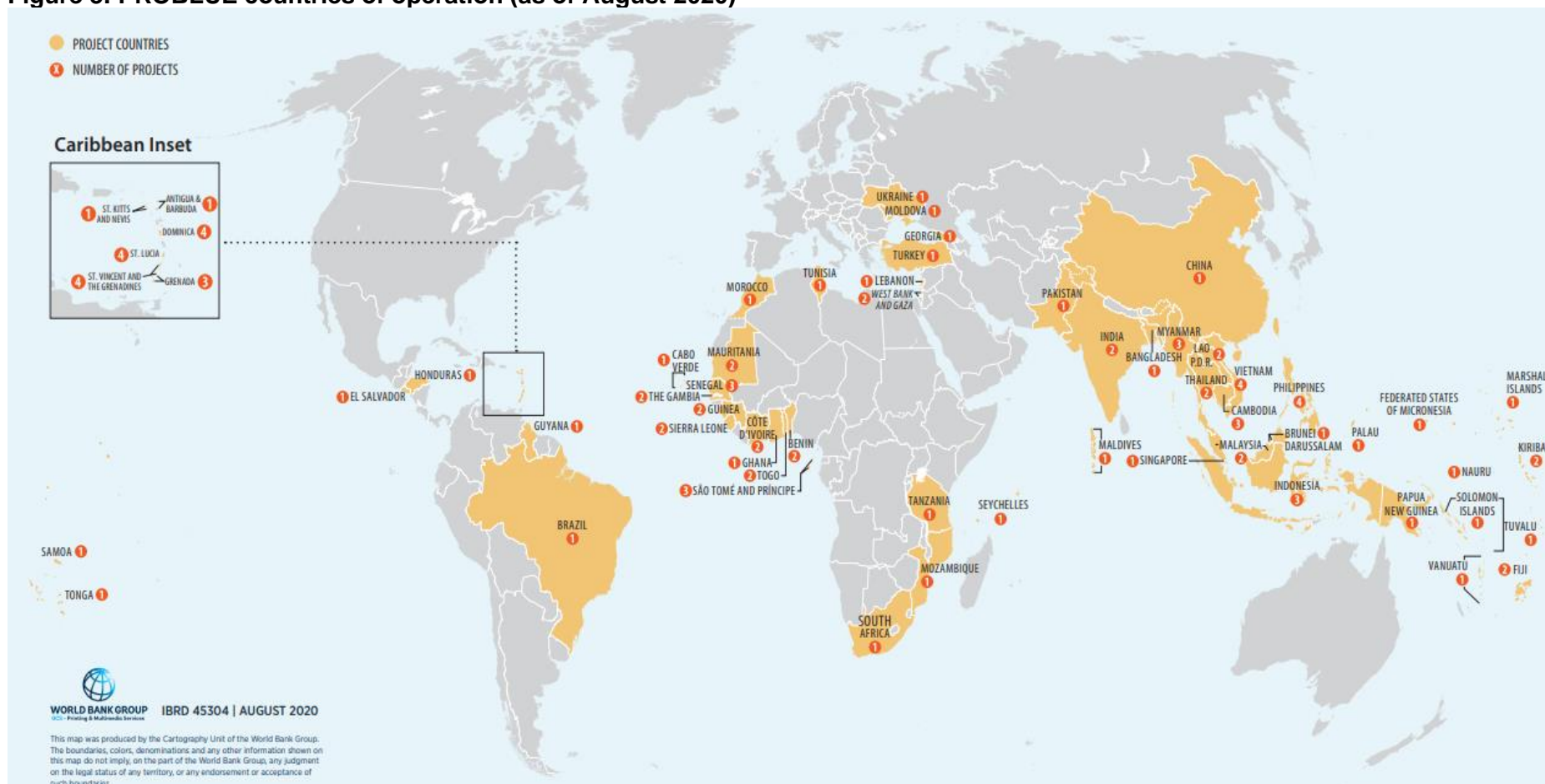
- ➔ utilise data at the regional and country levels to help client countries seize business and investment opportunities related to a decarbonisation pathway consistent with the Paris Agreement goals
- ➔ continued support of ESMAP's Offshore Wind Energy Program, with a view to enabling client governments adequately plan and roll out a country-scale spatial assessment of environmental and social aspects of offshore wind development
- ➔ studies on the economic impacts of MPAs on local economies (from tourism) was completed in FY21. This work will be expanded to various locations in FY22, to help build the economic case for more protected areas in client countries
- ➔ global analytical work on desalination and blue ports to meet demand for data and knowledge products

Pillar 4: Integrated seascapes

- ➔ the Blue Economy Development Framework⁷⁹ is rolled out to 12 countries across regions, including in Central America, Ecuador, Peru, Jamaica and Tanzania
- ➔ tools developed for natural capital accounting, socio-economic assessments and blue financing schemes (including payment for ecosystem services and private-sector engagement)
- ➔ institutional, regulatory and fiscal assessments that support the development of comprehensive blue economy strategies and that link to marine spatial planning to ensure sustainable allocation and use of marine resources and space
- ➔ collaboration with the Finance and Markets team to identify sustainable and replicable blue financing instruments. Options considered include coastal-ecosystem insurance instruments to enhance climate resilience and restore biodiversity and ecosystem services (financing green/blue)
- ➔ support to client countries to implement the recommendations of the High-Level Panel for Sustainable Ocean Economy, including work in Namibia to integrate blue carbon into NDCs in their Integrated Ocean Management Plan
- ➔ following the successful four-pillar engagement in the Caribbean (cf. the “Unleashing the Blue Economy of the Eastern Caribbean Project (UBEEC)” and the similarly all-pillar-encompassing intervention in Central America (the “Central-America Blue-Economy Program” - focusing on El Salvador and Honduras), activities in FY22 will continue to be cross-pillar, but with a stronger focus on fisheries and aquaculture and the potential of these sectors to create more, safe, and secure blue jobs to help with these countries recover
- ➔ issues and areas of intervention for identified activities include: (i) experiences following the establishment of marine protected areas (as well as nature reserves, marine parks, or similar), to assess their extent and location in order to maximise the positive impact on fish nurseries and broader biodiversity benefits while minimising the negative impact on fishers, fish workers and their communities; (ii) systems for the collection, analysis, use and dissemination of data, for the purpose of monitoring stocks as well as fishing activities; (iii) parametric insurance and social-protection measures for small-scale fishers and fishworkers; (iv) mariculture – e.g. for seaweed and shrimp and including off-shore operations; (v) the status of, access regimes for and interactions and trade-offs between domestic and long-distance-fishing-nation operations and their catches; (vi) value-chain analyses towards value addition and job creation; and (vii) a rigorous analysis of the verifiable value of recreational fisheries and their role in tourism operations
- ➔ planning and mapping for blue economy development in South Asia, including through MSP, NbS or other forms of integrated ocean management

⁷⁹ The framework consists of three core components, namely: (i) knowledge management; (ii) policy, institutional and fiscal reforms, and (iii) fostering investment in the blue economy. A suite of tools have subsequently been developed in support of the framework, to enable client countries to design and implement strategies for blue growth, tailored to their particular circumstances

Figure 3: PROBLUE countries of operation (as of August 2020)



ANNEX E: ECONOMIC ANALYSIS

Table 1: Examples provided by the World Bank of possible investment cases. Calculations were produced by the World bank using their assumptions and evidence.

Investment case description	Indicators	Targets (annual unless stated)	Associated calculation (all costs are in \$USD)
(1) Fisheries: management of access in artisanal fisheries (zoning, management planning, awareness raising) and voluntary collection of obsolete fishing gear at landing sites in artisanal fisheries (awareness raising, infrastructure for collection)	<ul style="list-style-type: none"> Fisheries under sustainable management (number) (non-cumulative) 	2 fisheries	\$2m (\$1m per fishery)
	<ul style="list-style-type: none"> Ghost gear reduced (t) (also indicator 'reduced leakage of plastics to the environment') 	x	\$1m - no evidence available to support the calculation
(2) Fisheries: management of access to fisheries (improved vessel monitoring and reporting) and reduction in use of obsolete fishing gear (through innovative incentive scheme and training)	<ul style="list-style-type: none"> Fisheries under sustainable management (number) (non-cumulative) 	2 fisheries	\$2m (\$1m per fishery)
	<ul style="list-style-type: none"> Ghost gear reduced (t) (also indicator 'reduced leakage of plastics to the environment') 		\$1m - no evidence available to support the calculation
(3) Coastal infrastructure project: voluntary collection of obsolete fishing (awareness raising, infrastructure to collect AFLDG, testing of incentive scheme) and improved enforcement (training of officials)	<ul style="list-style-type: none"> Ghost gear reduced (t) (also indicator 'reduced leakage of plastics to the environment') 	x	\$3m - no evidence available to support the calculation
(4) Peri-urban solid waste management: access to household waste collection (improved coverage and construction of safe disposal) and test of recycling of plastics (economic activity through community involvement including	<ul style="list-style-type: none"> Households connected to solid waste management services (number) 	<ul style="list-style-type: none"> 10,000 households (non-cumulative) 	\$2m- Cost per household connected to solid waste management is \$200
	<ul style="list-style-type: none"> Men and women in coastal areas with increased economic opportunities in traditional and/or new economic sectors (number), of which women (%) 	<ul style="list-style-type: none"> 2,000 (50%) (non-cumulative) 	\$1m - \$0.2m for training, \$0.5m for purchase of equipment and \$0.3m for business development service

training, purchase of equipment and business development service)	<ul style="list-style-type: none"> Leakage of plastics to the environment reduced (t) 	<ul style="list-style-type: none"> 1,375 t 	Derived of households connected to solid waste management - 3kg plastic collected per person *5.5 person per household *10,000 households
	<ul style="list-style-type: none"> Net GHG emissions reduced (tCO_{2eq.}) 	<ul style="list-style-type: none"> 12,000 tCO_{2eq} 	(1.2 * 10,000 t) - conversion factor 1.2
(5) Solid waste management: access to household waste collection (increased collection network and increased profitability of private operators)	<ul style="list-style-type: none"> Households connected to solid waste management services (number) 	<ul style="list-style-type: none"> 15,000 households (non-cumulative) 	\$3m - cost per household connected to solid waste management is \$200
	<ul style="list-style-type: none"> Leakage of plastics to the environment reduced (t) 	<ul style="list-style-type: none"> 2,063 t 	Derived of households connected to solid waste management - 3kg plastic collected per person * 5.5 person per household *15,000 households
	<ul style="list-style-type: none"> Net GHG emissions reduced (tCO_{2eq.}) 	<ul style="list-style-type: none"> 18,000 tCO_{2eq} 	(1.2 * 15,000 t) - conversion factor 1.2
(6) Aquaculture: improved production practices through extension (disease control) and access to input (brood stock) and innovative financing for processing and training on processing	<ul style="list-style-type: none"> Production in sustainable aquaculture (t) 	<ul style="list-style-type: none"> 800 t 	\$2m for production in aquaculture Average cost per aquaculture producer is \$10,000. Increase in total production per farm of 12 t (avoidance of collapse with control of diseases) with baseline of 8 t per producer and increase of 50% per producer. 200 small scale aquaculture producers *4 t annual increase in aquaculture production per farm
	<ul style="list-style-type: none"> Men and women in coastal areas with increased economic opportunities in traditional and/or new economic sectors (number), of which women (%) 	<ul style="list-style-type: none"> 2,000 (50%) non-cumulative 	\$1m for increasing economic opportunities \$0.5m for innovative financing with \$250 per processor and \$250 in training
(7) Pollution control and coastal tourism: household waste collection, community organisation	<ul style="list-style-type: none"> Households connected to solid waste management services (number) 	<ul style="list-style-type: none"> 5,000 (non-cumulative) 	\$1m - cost per household connected to solid waste management is \$200

in plastics collection (beach cleaning through labor-intensive work scheme)	<ul style="list-style-type: none"> Men and women in coastal areas with increased economic opportunities in traditional and/or new economic sectors (number), of which women (%) 	<ul style="list-style-type: none"> 5,000 (50%) (non-cumulative) 	\$1m - total cost for establishing labour-intensive work scheme for beach cleaning
	<ul style="list-style-type: none"> Leakage of plastics to the environment reduced (t) 	<ul style="list-style-type: none"> 688 t 	Derived - 25 kg plastic collected per person * 5.5 person per household * 5,000 households
	<ul style="list-style-type: none"> Net GHG emissions reduced (tCO_{2eq.}) 	<ul style="list-style-type: none"> 6,000 	(1.2 * 5,000) - conversion factor 1.2
(8) Plastic project: reduction in plastic littering (awareness raising and behavior change)	<ul style="list-style-type: none"> Leakage of plastics to the environment reduced (t) 		\$3m - no evidence available to support the calculation
	<ul style="list-style-type: none"> Net GHG emissions reduced (tCO_{2eq.}) 		No evidence available to support the calculation

Table 2: Table of assumptions used in modelling

This table has a list of assumptions made for the illustrative BCR analysis. For the appraisal of the option an appraisal of 30 years and the recommended 10% discount rate for ODA were used.

Indicators	Details	Confidence (low, medium, high)	Influence of assumption on BCR	How incorporated in analysis
3.1 Net GHG emissions reduced (tCO_{2eq.})	As part of the evidence provided by the WB, a conversion rate of 1.2 from waste (t) to co2 was proposed and used in this analysis. They also assume that 1 tonne of waste is generated per household. Given evidence from previous WB projects that have resulted in only a marginal improvement in % of solid waste managed, we assume that a third is could be improved after WB intervention.	High- Given assumptions are based on evidence from other programmes and studies. Carbon prices used to monetise the benefits are the central scenario provided by BEIS.	Low- This indicator has been used in half of the proposed programmes by WB. Using the lower carbon price provided by BEIS would reduce the upper bound of the BCR but only slightly.	Optimism bias incorporated in the range (conservative estimate used)

3.2 Ghost gear reduced (t)	Due to lack of evidence we assume that the reduction of ghost gear has the same marine benefits (\$) as reduction of plastic. See description below.	Medium- Ghost gear most likely has a greater impact on fishing than marine plastics. Therefore, the potential benefits might be higher. Therefore, a range is used to cover not only potential differences between project size and countries but possibility of ghost gear being having higher benefits associated with reduction.	Low- not an indicator used for every programme proposed. Hence has a small impact on the overall BCR.	This is part of the range of low to high estimates
3.10 Production in sustainable aquaculture (t)	<p>A report by the FAO⁸⁰ breaks down the top producers per region per fish. The regions that overlap with the SIDS and LDCs that will be supported under PROBLUE mostly produce Tuna and freshwater fish. Therefore, these are used as a proxy in price and quantity of what is produced in those regions.</p> <p>The price and quantity figures used are based on FAO figures for global production of aquaculture⁸¹.</p> <p>A range is assumed of the impact of sustainable practices and management has on the quantity/quality of aquaculture. The range is a potential increase in income of 50%-75% (£520-£780) per tonne.</p>	<p>Medium- these figures are based on regional statistics of produce. Therefore, there is the potential that the price and quantity will vary from the figures used at country level projects.</p> <p>However, by using a range it should mitigate some of this uncertainty.</p>	Low- Only one sustainable aquaculture proposed out of eight. Low impact on BCR is figures were to be lower or higher.	This is part of the range of low to high estimates
3.11 Leakage of plastics to the environment reduced (t)	Using the same assumptions as in the OCPP, that a third of the global benefits are used to represent PPP in LDCs and a more sensible estimate of the benefits from reducing plastic to their local communities. Additionally, the WB proposed that 25kg of leaked plastic into the Ocean could be reduced per person. Given evidence provided on countries such as Indonesia and Algeria, the estimate seems to be closer	Medium – will value from country to country. By using a range, it should mitigate some uncertainty.	High influence on BCR, hence a range used to cover the different values of ecosystems for, different degrees of marine dependencies and community value in countries PROBLUE may work in.	This is part of the range of low to high estimates, and optimism bias by using a lower kg and marine benefit estimates.

⁸⁰ [Fish to 2030: Prospects for Fisheries and Aquaculture \(fao.org\)](https://www.fao.org/fishery/publications/default.asp?lang=en&docid=1062022) , Table 3.5

⁸¹ [The State of World Fisheries and Aquaculture](https://www.fao.org/fishery/publications/default.asp?lang=en&docid=1062022), FAO (2020)

	<p>to 3kg of plastic waste reduced for lower income countries⁸². Therefore, a 3kg estimate is used instead.</p> <p>Use a third of the lower and upper bound global estimate from the Beaumont et al⁸³ study.</p>			
When benefits start to occur after programme implementation	Benefits occur 5 years after first year of programming. There are a range of benefits, from economic to nutritional, when these materialise are unknown and depend on host country commitment.	Medium – due to lack of evidence.	Low influence on BCR if the benefits start accruing a few years earlier or later. We believe the benefits of reducing plastic on ecosystems will be lower than the time it takes to fully restore habitat benefits which evidence suggest is 5-8 years.	
Projects will start at different times over the 5-year investment period.	This is due to spending into the PROBLUE being also spread over the 5 years. Therefore, the programmes are also spread out to match.	Medium – we are not sure exactly which programmes will start first.	There is a medium impact on the BCR, as the amount of benefits that materialise in the 30-year appraisal period may differ if larger programmes that deliver greater benefits start later.	

⁸² [Marine Litter Prevention](#), GIZ (2018)

⁸³ [Global ecological, social and economic impacts of marine plastic](#), Beaumont et al (2019)

ANNEX F: PROBLUE THEMATIC PRIORITIES ACROSS REGIONS

Thematic priorities AFR: Africa EAP: East Asia and Pacific ECA: Europe and Central Asia LAC: Latin America and the Caribbean MENA: Middle East and North Africa SAR: South Asia																											
Pillar 1: fisheries and aquaculture	A F R	E A P	E C A	L A C	M E N A	S A R	Pillar 2: preventing and managing marine pollution	A F R	E A P	E C A	L A C	M E N A	S A R	Pillar 3: oceanic sectors	A F R	E A P	E C A	L A C	M E N A	S A R	Pillar 4: seascape management	A F R	E A P	E C A	L A C	M E N A	S A R
Halting overexploitation in fisheries	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Preventing land-based and marine sources of plastic pollution	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Shipping & Ports	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Blue Economy Development Framework: Building capacity to transition to a blue economy	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Sustainable aquaculture development	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Preventing land-based sources of marine plastics from private sector	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Sustainable coastal tourism	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Coastal Resilience with NBS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Cross-sectoral SWM & pollution in ports and maritime transport	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Offshore renewable energy	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Financial Innovation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
							Cross-sectoral SWM & pollution in tourism	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Improved desalination practices	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>							
							Preventing multiple sources of pollution, incl. plastics	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>														

Key: green: new theme; orange: new theme from the FY20 annual workplan