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2021 ANNUAL REPORT

PROBLUE

ADMINISTERED BY
THE WORLD BANK
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PROBLUE is an Umbrella 2.0 program administered by the World Bank; it supports the development of integrated, sustainable, healthy marine and coastal resources.

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The fiscal year covered in this report (FY21) runs from July 1, 2020, to June 30, 2021; the financial contribution and expenditures reported are reflected up to June 30, 2021; all amounts are in U.S. dollars (\$) unless otherwise indicated.

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FOREWORD

The crisis that COVID-19 has wrought has affected us all, especially the world's poorest. The global pandemic has shone a harsh light on the vulnerability of communities, livelihoods, and the global socioeconomic fabric. It has strained blue ecosystems, with a surge in single-use plastics reaching waterways and oceans, and disproportionately affected the lives of coastal and island communities.

PROBLUE was launched in 2018 in part because the world was recognizing the unique role oceans play as engines of development—supporting livelihoods, curbing climate change, and providing biodiversity. In 2021, as countries look for ways to rebuild economies that the pandemic has devastated, sustainable ocean development is more important than ever.

In the face of these challenges, the World Bank and the International Finance Corporation, with support from PROBLUE, have continued to build on our record of promoting a blue economy and to advance a knowledge agenda to “build back bluer.” Despite the complexities of ocean resource development and the need for integration that lies at the heart of the blue economy approach, in fiscal year (FY) 21 alone, PROBLUE has supported 31 new activities totaling \$17.5 million across 21 countries. As of FY21, the overall PROBLUE portfolio has increased to a total of \$60.3 million to support 85 activities across 71 countries.

Integration with the World Bank's key priorities is the cornerstone of PROBLUE's work. The health of our oceans depends heavily on a series of interlocked, cross-cutting factors, including climate change, gender equality, and mobilizing financing for development. We are pleased that, in FY21, there was an increase in proposals addressing these areas, as well as greater involvement with regional partners. The program has provided support for activities across the World Bank Group while building the Bank's communication and knowledge management capabilities.

Sustainable ocean management and development are critical to curbing climate change, and investments in areas such as the circular economy and sustainable fishing increase climate resiliency, drive job creation, and support economic stability in coastal communities. Investments in critical coastal and marine ecosystems—from an array of partners that include governments and the private sector—is vital for a blue economy to flourish and to help rebuild devastated coastal communities. To that end, as of FY21, PROBLUE has added value to 76 investments totaling more than \$7.4 billion.

As PROBLUE completes its second full year of operation, this report illustrates that a blue recovery drives sustainable ocean development, tangible progress toward achieving the Sustainable Development Goals, and, most importantly, economic recovery for vulnerable coastal populations

around the world. Together, we stand ready to help drive a blue recovery and make real, tangible progress toward sustainable development that offers a healthier, more prosperous future for people and planet.



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ACRONYMS

ASEAN	Association of Southeast Asian Nations
BEDF	Blue Economy Development Framework
BEST	Bangladesh Environmental Sustainability and Transformation Project
ESMAP	Energy Sector Management Assistance Program
FAO	Food and Agriculture Organization of the United Nations
FCV	Fragility, conflict and violence
FiTI	Fisheries Transparency Initiative
FY	Fiscal year
FY21	Fiscal year 2021
GHG	Greenhouse gas
GP	Global Practice
IFC	International Finance Corporation
IMO	International Maritime Organization
MFD	Mobilizing Finance for Development
M&E	Monitoring and evaluation
MozAzul	Mozambique PROBLUE Program
MSP	Marine spatial planning
NDC	Nationally determined contributions
OECD	Organisation for Economic Co-operation and Development
SDG	Sustainable Development Goal
SIDS	Small island developing states
UNCTAD	United Nations Conference on Trade and Development
UNEP	United Nations Environment Programme
WASH	Water, sanitation, and hygiene
WBG	World Bank Group
WTO	World Trade Organization



1. BUILD BACK BLUER: THE BLUE ECONOMY AS KEY TO AN INCLUSIVE RECOVERY

The COVID-19 crisis has laid bare the vulnerabilities of large swathes of the global economy, with impacts especially pronounced for the world's poorest people and coastal and island communities. Coronavirus-related disruptions are especially acute in global food supply chains (including seafood supply chains) and the tourism industry, with crucial small and medium enterprises in these sectors particularly vulnerable. Women are disproportionately affected in some of the ocean-economy activities hardest hit by the COVID-19 crisis; for example, women form the majority of the work force in the fisheries and aquaculture post-harvest sector. As we work with countries to build back their economies and strengthen their communities, it cannot be business as usual; sustainability must be fully built into the recovery.

A more holistic and inclusive recovery, which embraces both blue and green recovery, aligns fully with the Bank's goal of achieving Green, Resilient and Inclusive Development (GRID) in client countries. The pandemic has struck at a time when oceans are under increasing threat from myriad impacts—from the warming effects of climate change to pollution caused by coastal run-off and marine litter, overfishing, and coral reef and biodiversity loss.

As the world recovers from COVID-19, investment in ocean development under a blue recovery is more important than ever—especially for vulnerable coastal peoples who rely on oceans for their livelihoods.

In its second full year of operation, PROBLUE has maintained its focus on developing healthy

economies for healthy communities in healthy oceans. A multi-donor trust fund administered by the World Bank, PROBLUE supports the development of integrated, sustainable, healthy marine and coastal resources.

Launched in the fall of 2018, PROBLUE's current contributions now amount to more than \$151 million, with support from Australia, Canada, Denmark, the European Commission, France, Germany, Iceland, Ireland, Norway, Sweden, and the United States. The program was set up in response to demand from client countries, and this demand continues to grow in terms of support for work in individual sectors—ranging from the challenges that marine pollution and plastics present to challenges specific to fisheries and coastal management—and requests for more integration of these sectors.



PROBLUE's efforts are fully aligned with key World Bank priorities, including achieving gender equality, mitigating climate change, mobilizing financing for development, and focusing on the most vulnerable people in fragile and conflict-affected situations. As a result, PROBLUE activities strengthen not only ocean health, but also the wellbeing of those most in need, thus aligning with the World Bank's broader goals.

In fiscal year (FY) 21, PROBLUE efforts proved vital to ocean development; progress toward the Sustainable Development Goals (SDGs); and most importantly, recovery from COVID-19 for vulnerable coastal populations around the world.

The blue economy presents an economic opportunity to support recovery from COVID-19. By 2030, the Organisation for Economic Co-operation and Development (OECD) estimates that the economic value of oceans will be \$3 trillion, although how much and how fast the ocean economy grows will ultimately depend entirely on how it is managed as a whole. That is why PROBLUE's work in FY21 focused on three main objectives: lay the groundwork for a blue recovery, strengthen the blue economy into the World Bank Group's (WBG's) portfolio, and continue to inform the design of new WBG operations and add value to existing operations during implementation across the WBG's blue portfolio.

COVID-19 RESPONSE AND RECOVERY

Globally, the impact on the ocean economy of the pandemic is significant and on-going. Countries that rely on marine industries such as fisheries, shipping, and tourism are facing significant challenges and are seeking to combine short-term relief with long-term solutions. For example, Lloyd's List Intelligence estimates that maritime shipping has dropped by up to 30 percent in some regions.

To counter these economic and social impacts, many countries have initiated recovery packages and are seeking ways to rebuild greener—or bluer. As of June 2020, the International Monetary Fund reported that governments had spent \$10 trillion on fiscal actions with a view to repairing and rebuilding the global economy. According to the United Nations Conference on Trade and Development (UNCTAD), the pandemic offers the opportunity to shift resources allocated to vessel over-capacity in sectors such as fisheries and maritime transport toward a variety of policy tools and instruments that encourage ecosystem restoration or increase sustainability, traceability, and digitalization in the sector.

The World Bank, with support from PROBLUE, is uniquely positioned to help its client countries as they chart their course to rebuilding by assisting with prioritizing and mobilizing new investments for a blue economy—defined as the sustainable and integrated development of oceanic sectors in healthy oceans. This includes increasing support for the health and safety of front-line workers in coastal communities (including the overwhelmingly female workers in the tourism industry) and supporting required policy and institutional reforms.

For example, in FY21, PROBLUE supported key blue recovery projects in small island developing states (SIDS) and small coastal nations in the tourism sector, as well as activities focused on water, sanitation, and hygiene (WASH) interventions in fisheries and aquaculture and their value chains.

According to the UNCTAD Division on International Trade and Commodities, SIDS earn \$30 billion annually from travel and tourism, driven by their coastal and marine resources. Consequently, the impacts of COVID-19 have been particularly devastating for these destinations from economic and environmental



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perspectives,¹ especially for women, who account for more than half of those employed in the accommodations and food service sectors. Emerging research from the Inter-American Development Bank, World Economic Forum, and Surfrider Foundation suggests that health and hygiene measures to address COVID-19 will increase consumption of water, single-use plastics, and cleaning chemicals harmful to delicate island ecosystems.

As SIDS engage on a path toward recovery, they face a key development challenge in how to develop their tourism industry sustainably while managing the environmental impact of the COVID-19 crisis, including greater fresh and purified water use and land and marine pollution. With an initial focus on the Gambia, Cabo Verde, and São Tomé and Príncipe, the PROBLUE activities supported in FY21 included knowledge development, guidelines and digital training, and supporting innovation

for enhanced competitiveness of tourism—a foundational element of the blue economy in these countries. This work aims to help mitigate adverse environmental impacts of adaptation to COVID-19 health standards, and its results will be shared through a regional event and other dissemination channels to promote uptake of project deliverables and lessons that SIDS in other regions have learned.

In the context of the COVID-19 pandemic, Water, Sanitation and Hygiene (WASH) interventions have become even more critical to the safe operation of fishing, aquaculture, and related activities—small and large scale. Although representative data are not available, anecdotal evidence suggests that WASH opportunities are often lacking, particularly along the smaller-scale fish value chains. The lack of WASH interventions is much associated with rural communities and as a factor contributing to poverty. Ensuring good,

¹ A decline in tourism receipts by 25 percent will result in a \$7.4 billion (7.3 percent) fall in GDP, according to UNCTAD. UNWTO estimates tourism will decline between 58 and 78 percent in 2020.

consistently applied WASH and waste-water management practices along the fish value chain is important to prevent human-to-human transmission of COVID-19. Also, improving aquaculture waste-water management and investing in long-term antimicrobial-resistance strategies reduces environmental contamination, disease, and a vicious cycle of antibiotic overuse. Otherwise, those involved in the fishing sector or living and working near aquaculture facilities are at greater risk of infectious disease, including COVID-19, and contribute to antimicrobial resistance. Therefore, in FY21, PROBLUE initiated activities focused on WASH, with the aim of developing diagnostic tools and guidance to increase health and food safety, reduce the spread of COVID-19, and reduce antibiotic resistance.

In addition to its impact on vulnerable populations, the pandemic prompted a noticeable surge in plastic consumption, posing difficult short-term choices between health and the environment and resulting in greater use of single-use plastics and more medical waste, which tend to end up in oceans. PROBLUE is uniquely positioned to address this because of its ability to provide and finance the analytics that inform investments in policy reform and the infrastructure that is critically lacking to handle the marked increase in single-use plastics. In FY21, PROBLUE financed improvement of solid waste management, identification of opportunities and bottlenecks for recycling markets, baselines and assessments of the sources of single-use plastics and their impacts on the environment and economic sectors, and possible policy reforms and investment needs for plastic pollution prevention. PROBLUE also helped improve medical waste management, for example in Nigeria and Bangladesh.

Ultimately, PROBLUE applies a blue lens to recovery efforts to facilitate ocean-smart investments, policy reform, and support for

communities. Following the effects of COVID-19 on the economic wellbeing of coastal economies and the growing impacts of climate change, PROBLUE's integrated approach across people and planet is vital to reimagining a better, bluer world.

INTEGRATION

Oceans—their physical properties, the life they sustain, their economic activities—are interconnected, with a change in one affecting the others. Harm to one element of this interlinked network has knock-on effects.

For example, overfishing one species can affect the entire food chain, surrounding ecosystems, and related economic activities. The impacts of climate change add a layer of stress on marine species and ecosystems. For instance, increases in ocean acidity lead to coral bleaching, depleted stocks of some species, disrupted biodiversity, and declining tourism revenues. If offshore energy projects are sited in unsuitable locations, renewable energy enterprises can disrupt breeding and feeding grounds and migration patterns, with impacts on fishery and tourism revenues.

The opposite is also true; planting mangroves in the right location can lead to biodiversity recovery, benefiting coastal economies by buffering against flooding and sea-level rise and increasing carbon dioxide uptake by creating a potent carbon sink.

Oceans are at the heart of sustainable development and poverty reduction. Covering more than two-thirds of the planet, oceans are a source of food, recreation, climate regulation, and livelihoods for billions of people. Oceans provide the medium through which 85 percent to 90 percent of global trade is transported. Billions of people worldwide—especially the world's poorest—rely on healthy oceans,

underscoring the urgent need to sustainably use and protect this natural capital.

Working within this vast, complex, inextricably linked ocean ecosystem poses a unique challenge, in that the stress of these uses is shared between sectors—old (fishing, shipping) and new (offshore renewable energy generation, desalination, marine bioprospecting)—which is why PROBLUE is designed to cut across themes, pillars, and issue areas to provide a holistic view of oceans spanning ecosystems, sectors, and infrastructure. Using a two-pronged approach, PROBLUE focuses on creating an enabling environment for sustainable development for the oceans and then catalyzes investment from players from a variety of sectors.

Through PROBLUE's efforts, conditions are created for the proper investments and sustainable development of oceans, including through marine spatial planning (MSP), blue financing, and assessments. These efforts lay the groundwork for investments, informing decisions with a holistic view of the blue economy—looking across many industries to view how decisions affect the oceans overall.

After having focused on building an enabling environment for ocean development, PROBLUE is now working to catalyze investments for ocean-focused projects. Investments in different sectors also influence and shape each other. Everything is interrelated, which is why integrated work across industries with PROBLUE is so important. This dual approach fosters the WBG's ability to provide cost-

effective financing to its client countries, in combination with the technical expertise required to best direct investment and support successful implementation of activities.

PROBLUE works across a complex web of actors, beneficiaries, and infrastructure to weave together a holistic approach to sustainable development for the oceans—and it is working. In Sri Lanka, for example, a cross-sectoral World Bank team, supported through PROBLUE, invested in an improved knowledge base for prioritizing investments, institutional changes, and policy actions in the blue economy, specifically fisheries.

Integration between different oceanic sectors is a focus for PROBLUE and blue recovery because it aligns with the World Bank's mission to reduce poverty, increase shared prosperity, and promote sustainable development. The PROBLUE Secretariat collaborates with colleagues in regions and global practices to influence, inform, and shape the World Bank's approach to development in oceans—sharing expertise internally; generating demand for ocean-focused activities; and strengthening proposals for funding to PROBLUE through consultations, knowledge sharing, research dissemination, and guiding colleagues on ocean-specific development to inform and strengthen the design and implementation of World Bank operations. Additionally, PROBLUE resources, along with other trust-fund programs as relevant, can be strategically deployed to leverage other resources within the World Bank and, where appropriate, at other public stakeholders, as well as the private sector.



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ADDING VALUE

PROBLUE is enhancing the WBG's mission and amplifying its strengths in support of sustainable development.

A dual focus on analytical work and technical support to regional teams is being used to build on the World Bank's strengths and will ultimately increase the size of its portfolio of sustainable blue operations and thus our impact. Considering investments and policy reforms in all oceanic sectors, including those influenced by PROBLUE, in FY21 the World Bank's ocean economy portfolio exceeded \$9 billion. This portfolio includes projects such as sustainable fisheries and aquaculture, integrated coastal and marine ecosystem management, circular economy and improved solid waste management of marine plastics, sustainable coastal tourism, maritime transport, and offshore renewable energy.

PROBLUE has supported capacity building and creating an enabling environment at the

national and regional levels by helping develop baselines, including filling data and knowledge gaps that then help client countries find the best opportunities and determine next steps to build a comprehensive, scalable blue economy. PROBLUE's technical assistance, capacity building, and knowledge products directly add value and inform the design, preparation, and implementation of investment projects. As of FY21, PROBLUE is adding value to 76 investments totaling more than \$7.4 billion, a 49 percent increase from \$3.6 billion over FY20.

PROBLUE aims to help client countries mainstream a blue economy approach as they develop their ocean economies and shift from single investments in individual ocean sectors to more systematic, integrated, holistic management of seascapes by identifying constraints, opportunities, and trade-offs between sectors at every phase of policy planning, investment-project design, and implementation. This shift requires moving beyond business as usual and focusing on new practices and approaches that can enhance

the sustainability of these sectors and limit the damage they do to ocean health.

PROBLUE support has helped implement a blue economy approach at the national level, with activities in areas that include the circular economy, decarbonization, fisheries governance and aquaculture, offshore renewable energy, sustainable maritime transport, government capacity to manage marine resources, nature-based solutions, and plastic waste reduction.

For example, in East Asia, PROBLUE has helped identify operations through blue economy activities. One such example is Cambodia, which received analytical and advisory support from the PROBLUE Secretariat, to improve solid waste management, understand the magnitude of plastic pollution, and identify possible solutions and policy reforms to manage plastics and solid waste overall. This work has led to preparation of a \$60 million International Development Association credit operation.

In FY21, a series of PROBLUE-funded reports were produced that identified green fuels (ammonia and hydrogen) as the most promising zero-carbon bunker fuels for the shipping industry. Global maritime transport plays a crucial role in facilitating trade and fostering economic development internationally, although the sector also contributes to global climate change and local air pollution, producing around 3 percent of global greenhouse gas (GHG) emissions and emitting an estimated 15 percent of some of the world's major air pollutants. The series of reports highlighted that decarbonizing maritime transport offers a unique business and development opportunity for countries, including developing and emerging economies. According to the International Energy Agency,

for developing countries with large renewable energy resources, this could mean tapping into an estimated \$1 trillion or larger future fuel market while modernizing their own domestic energy and industrial infrastructure. As a result, many countries—developed and developing—could become zero-carbon bunker fuel producers for the first time, especially given the projected growth of these fuel options in the coming decades.

BUILDING BACK BLUER

PROBLUE's efforts continue to help guide investments that will contribute to development of ocean sectors in a sustainable, integrated fashion to secure the best outcomes for World Bank client countries.

Many blue economy and build back bluer efforts are under way and can be enhanced, under a shared common goal, with common recognition of the importance of oceans and their vulnerability and ultimately will be implemented by different groups within the World Bank. This is true not only in a number of traditional sectors of the ocean economy such as fisheries, shipping, and waste management, but also in more innovative sectors such as offshore renewable energy and desalination. In the case of the former, reform is necessary, whereas in the latter, countries have a chance to get it right from the outset.

A blue economy approach that builds back bluer supports the facilitation and financing of this transition to support sustainable ocean development; progress toward the SDGs; and most importantly, recovery from COVID-19 for vulnerable coastal populations around the world.



2. ABOUT PROBLUE

PROBLUE is an Umbrella 2.0 program administered by the World Bank's Environment, Natural Resources and Blue Economy Global Practice. It is dedicated to helping client countries transition to a blue economy approach, seeking to achieve *integrated, sustainable economic development in healthy oceans*. The PROBLUE program comprises a multi-donor trust fund and several associated trust funds, including the various PROFISH trust funds, and a separate PROBLUE single-donor trust fund. PROBLUE resources, along with other trust fund programs as relevant, can be strategically deployed to leverage other resources within the Bank and, where appropriate, other public vehicles and the private sector.

PROBLUE is organized around four pillars: 1) improved fisheries governance and sustainable aquaculture; 2) marine litter and pollution management; 3) the blueing of oceanic sectors; and 4) integrated seascape management. Support for these pillars, and for important cross-cutting topics such as gender equality, climate change, and mobilizing finance for development (MFD), allows for comprehensive responses to the challenges facing our oceans. PROBLUE is structured to provide analysis and knowledge platforms for stakeholders, helping resolve problems including overfishing, pollution, and unsustainable coastal development. PROBLUE and these stakeholders come together to interact and collaborate with least-developed countries, middle-income countries, and SIDS to co-create solutions.

SUMMARY OF PROGRESS

In FY21, PROBLUE provided material support for activities across the WBG while also

building the Bank's communications on oceans and knowledge-management capabilities. The numbers support this claim; in FY21 alone, PROBLUE approved proposals amounting to more than \$17.5 million. These figures illustrate the impact that PROBLUE is having, not only in moving the global conversation on sustainable growth in oceans forward, but also for the benefit of World Bank client countries and their communities.

PROBLUE relies on strong partnerships with national and regional implementing teams to support operations of the highest quality for client countries. In FY21, around 77 percent of accepted proposals will directly support activities at the national and regional levels in 21 countries across all regions. This was the result of constructive dialogue about the submitted proposal and country priorities and drew from the latest trends and available science.



CROSS-CUTTING THEMES

Gender Equality

Women and men often use and manage marine and coastal ecosystems and resources differently and have different knowledge, capabilities, and needs, and environmental changes tend to affect them differently, but these differences are routinely ignored or underestimated in policy and planning. Globally, women are economically active in coastal zones, but their contributions are often neither registered in official records nor recognized by society, and they are often marginalized in decision making. Women contribute significantly to sectors such as fisheries and aquaculture and to the processing and trading of marine products, as well as to waste management, coastal tourism, conservation measures, and coastal disaster-risk reduction. PROBLUE seeks to address some of these inequalities by closing gender gaps and promoting women's empowerment in ocean development activities.

Throughout FY21, the PROBLUE Secretariat collaborated with other teams to identify and enhance opportunities to integrate gender into activities. Implementing a blue economy approach without focusing on gender and social inclusion would be short-sighted and preclude any hope of achieving long-term sustainability. Exclusion of women and other marginalized people from decision-making processes contributes directly to the growing threats confronting oceans, and ignoring them also ignores key solutions to these problems.

In FY21, 90 percent of activities approved included gender-sensitive elements in their proposals, indicating that the proposals had identified the gap the activity is trying to address or narrow, what action(s) are needed to do so, and how action(s) are measured (indicators). In nearly all PROBLUE-financed activities, the World Bank considers the

different needs of women and men, girls and boys, and the different ways in which they interact with the marine environment.

Progress in terms of PROBLUE's gender-equality achievements in FY21 are highlighted throughout this report. They include:

Gulf of Fonseca: With the governments of Honduras, El Salvador, and Nicaragua, PROBLUE is piloting a social-protection system to support female entrepreneurs in the artisanal fishing and aquaculture value chains. This regional effort is also supporting female entrepreneurship by identifying constraints on gender-equal access to blue economy jobs (fisheries and tourism). This work is primarily focused on the Build Back Bluer approach to support coastal communities' recovery after hurricanes Eta and Iota and the COVID-19 pandemic.

Tanzania: PROBLUE is supporting women in business training related to seaweed production, ecotourism linked to fisheries, and plastic pollution management. This country-level work is centered on marine pollution and will develop guidelines for job opportunities that address gender-equality actions with respect to plastic pollution and waste management.

Bangladesh: The gender study that PROBLUE financed is identifying job opportunities for women in retrieving abandoned, lost, or otherwise discarded fishing gear and is raising awareness and introducing ideas for business opportunities at the community level. The government will pilot the gender-equitable net recycling activities in two sites.

Haiti: PROBLUE is working with the government on a gender analysis to understand how coastal ecosystem degradation affects women. This analysis will ensure that contrasting vulnerabilities of men and women are taken into account for all analyses and



Philippines / © Shutterstock / danstin hideo muraoka

fully integrated into development of the flood reduction roadmap, specifically in the planning of blue livelihoods, and coastal nature-based solutions.

Climate Change Adaptation and Mitigation

The effects of climate change on oceans are becoming better understood as climate impacts continue to grow. Some of these effects are already acutely felt, with coral bleaching a particularly visible and documented effect of increases in water temperatures, but climate change is also causing changes in fish migration patterns, mostly from tropical areas toward the poles, and in fish stock biomass due to increased temperatures, acidification, and deoxygenation. These changes, in turn, have severe economic impacts on the often-impooverished communities that are among the most vulnerable. According to the World Economic Forum, adaptation and mitigation are also intertwined with the marine plastics agenda; under a business-as-usual scenario, the plastics' share of the carbon budget could grow from 1 percent in 2014 to 15 percent by

2050. Without improvements in solid waste management, it is anticipated that solid waste's contribution to climate change will increase to 2.6 billion tons of carbon dioxide-equivalent by 2050 (from 1.6 billion tons generated in 2016). Litter and waste clogging drains directly affect resilience in coastal areas.

In recognition of these challenges, PROBLUE-funded activities are aligned with the WBG 2021-2025 Climate Change Action Plan, which lays out commitments and targets, as well as concrete actions to help countries address current and future climate risks and opportunities. The launch of the new Country Climate Development Reports provides another opportunity to ensure that oceans, blue natural capital, and their interaction with climate change are fully incorporated into the strategic process that guides partnerships with World Bank client countries.

In FY21, 90 percent of the activities approved considered the impact of climate change in their proposals, indicating that the activities will

help build resilience. PROBLUE's climate change adaptation and mitigation achievements in FY21 are highlighted throughout this report. They include:

Pakistan: PROBLUE is supporting the revised nationally determined contribution (NDC), which includes the blue carbon (the carbon stored in coastal and marine ecosystems) rapid assessment to help the government enhance its commitments in the revised NDCs through blue carbon ecosystems and prepare for the next round of revisions toward mitigating climate change. More specifically, national and provincial review of blue ecosystem climate change mitigation and adaptation policies and regulation finds that, in Pakistan, blue carbon has great climate change mitigation and adaptation value and should be integrated into the upcoming NDC revision. The blue carbon assessment has provided model language and policy recommendations to the Ministry of Climate Change on the NDC revision.

Nigeria: There are direct linkages between plastic and waste management and the climate change agenda. Solid waste burning leads to GHG emissions and air pollutants (inhalable particulate matter, nitrogen dioxides, sulphur dioxides, ozone) that are toxic to human health and the environment. Dumping of waste, especially plastics, clogs the already insufficient storm water drainage system, increases flood risk, and releases methane and GHGs into the environment. To address these challenges in Nigeria, PROBLUE is supporting the assessment of baseline GHG emissions and air pollution linked to plastics and mismanaged waste, including measurement of GHG emissions and air pollution levels in waste disposal locations and dumpsites. The output of the assessment will be a technical note that will recommend better solid waste management practices, supporting climate change mitigation. In

addition, the PROBLUE-supported activity will inform plastic waste recycling and market creation in Lagos with less material and energy use and will in turn reduce GHG emissions.

Sri Lanka: PROBLUE-funded activity will increase the understanding of the impact of climate change on fisheries, fishing communities, and the ecosystems that sustain them, notably with regard to coastal erosion, loss of beaches and fish-landing sites, increased storm surges damaging anchorages and fishery harbors, destruction of coastal habitats such as reefs and mangroves, and damage to fish stocks. Ecosystem and habitat conservation measures would contribute to adaptation to sea-level rise, flood protection, and climate mitigation from mangroves and seagrasses, where applicable.

Marine Spatial Planning: Changing oceans can influence MSP considerations, and MSP initiatives that are designed and implemented with explicit climate-related objectives can decrease climate impacts, support climate adaptation and mitigation actions, and promote sustainable use and conservation of oceans. Climate-induced changes in ocean conditions and in the structure and functioning of marine ecosystems will lead to changes in the distribution and intensity of ocean-related human uses, which will lead to new potential use-use and use-environment conflicts and governance challenges, which are at the core of MSP processes. PROBLUE is supporting the development of a guidance note, which includes the nexus between climate change and MSP that will evaluate past experiences and make recommendations for a climate-informed MSP process that can incorporate these challenges and dynamics to support climate adaptation and mitigation and implementation of SDG 13—Climate Action.

Mobilizing Finance for Development

The private sector has a critical role to play in helping prevent marine pollution by leading and financing innovation or financially contributing through fiscal and regulatory mechanisms. The areas of intervention vary depending on the segment of the value chain and include waste management companies that can implement waste management solutions and foster technological innovation through public-private partnerships to reduce, reuse, or recycle plastics before they become waste, and also include consumer goods companies and plastic producers and manufacturers, who can drive innovation in new materials and alternatives to single-use plastics.

In line with the World Bank's corporate mobilizing finance for development approach, PROBLUE aims to leverage private sector partners to promote sustainable investment in ocean sectors by helping client countries enact financial policies that provide a supportive climate for investment.

In FY21, 55 percent of activities approved included MFD as a cross-cutting theme in their proposals, indicating that the proposals encourage private sector investment in the oceans.

PROBLUE's MFD achievements in FY21 are highlighted throughout this report and include:

Aquaculture: Reducing disease risk in aquaculture by investing in health management (see Section 4) can lower the risk profile of aquaculture investments and thus attract private equity in an MFD model that will directly address the global knowledge objective of developing sustainable aquaculture by improving biosecurity. By addressing the under-capitalization of the aquaculture

sector and thereby increasing revenues and job opportunities, the activity will create opportunities for the private sector.

Recycling and Plastics: Market studies in Malaysia, Thailand, the Philippines, and Vietnam have helped foster dialogue between the International Finance Corporation (IFC) and the private sector on plastic recycling and alternatives that has helped unlock the potential for private sector investments. The market studies were conducted in partnership with IFC to determine opportunities for and barriers to private sector engagement in plastics. IFC arranged a landmark \$300 million financing package in Thailand in November 2020 for Indorama Ventures to help the company increase its plastic recycling capacity in Brazil, India, Indonesia, the Philippines, and Thailand. This first-ever blue loan to a global plastic resin manufacturer will lead to the recycling of 50 billion polyethylene terephthalate (PET) bottles globally per year by 2025. Other similar investments are being explored in China, Indonesia the Philippines, and Vietnam.

Blue Economy Industries: PROBLUE-funded activities have substantially contributed to MFD by providing recommendations on PROBLUE-funded activities that have influenced the design of two World Bank investment project financing operations. Pillar 4 (seascape management) engaged several private sector actors from diverse blue economy sectors, including tourism, mining, and fisheries. As a result of engagement under Pillar 4, a project in partnership with the company Nacala Logistics is expected to be funded under the South West Indian Ocean Fisheries Governance and Shared Growth Project, including activities linking fishers to the company's catering service and promotion of mangrove protection.





3. PROGRESS REPORT FOR FY21

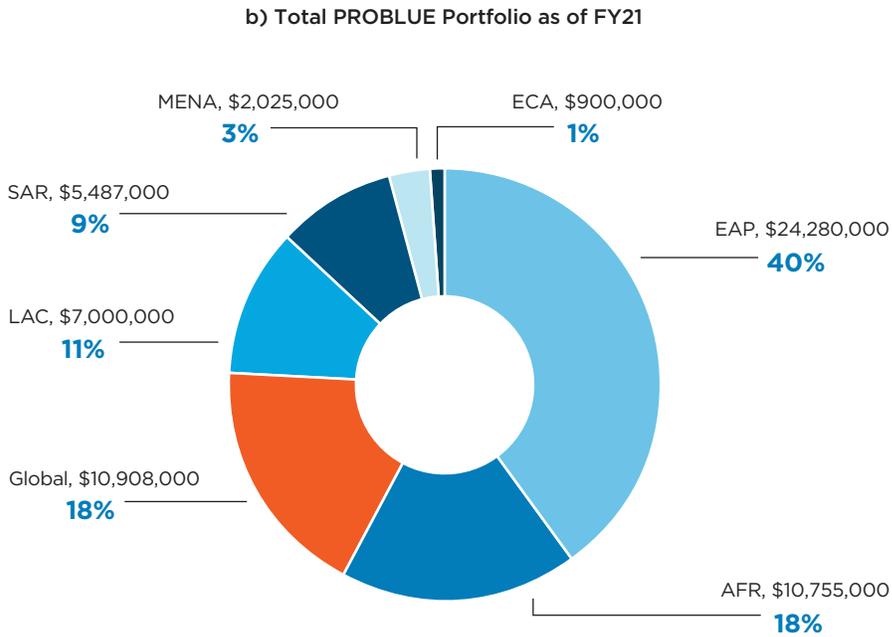
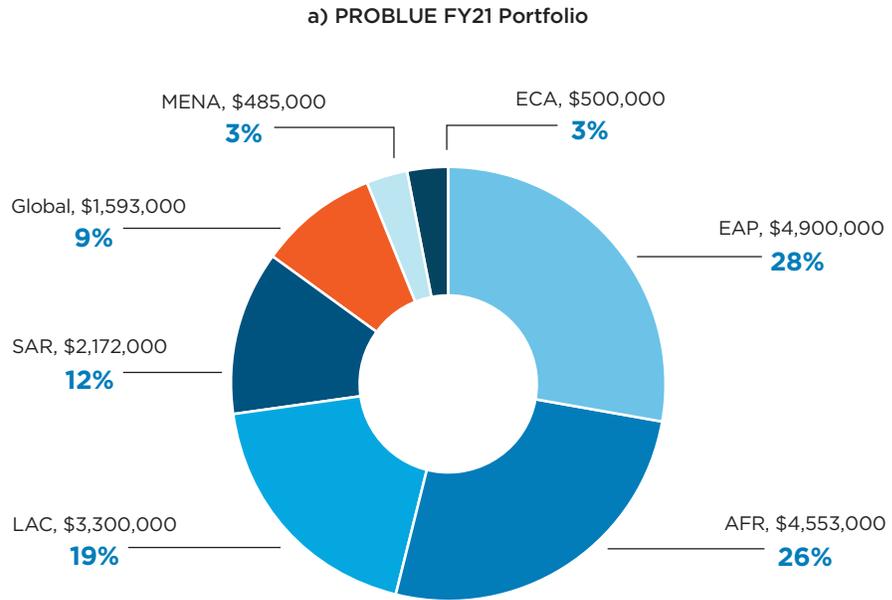
PROBLUE BY THE NUMBERS

Marking only its second full fiscal year of operation, PROBLUE mobilized significant funding despite the significant challenges that the COVID-19 pandemic posed. The figures below illustrate the program’s commitment to integrated multisector work, as well as targeted strategic engagements in single sectors, with a strong emphasis on the cross-cutting themes of gender equality, climate change adaptation and mitigation, and private sector involvement.

- The PROBLUE portfolio has grown significantly. In FY21, 31 proposals were accepted, increasing the total number of approved proposals to 85. The proposals accepted in FY21 amounted to more than \$17.5 million, increasing PROBLUE’s total portfolio to \$60.3 million.
- So far, PROBLUE has supported design and implementation of 76 active and pipeline lending operations amounting to more than \$7.4 billion, with every \$1 of PROBLUE funding influencing \$215 in lending operations. In FY21, \$7.6 million, or 43 percent of total approved funds for PROBLUE proposals, directly supported design and implementation of 14 active and pipeline lending operations totaling \$1.4 billion.
- In FY21, PROBLUE emphasized applying emerging lessons from global products to inform regional and national work; 77 percent of approved activities are supporting regional or national engagements.
- Because the blue economy covers multiple sectors, about 61 percent of PROBLUE activities are in collaboration with teams outside the Bank’s Environment, Natural Resources and Blue Economy practice. This includes teams from the Urban, Social, Tourism, Agriculture, Transport, Health, Energy, Climate Change, Gender, and other global practices (GPs) and practice groups, as well as joint teams with IFC.
- PROBLUE has continued to champion cross-cutting areas such as gender equality, climate change adaptation, and MFD; 90 percent of funded activities have a gender component, 90 percent are focused on climate change, and 55 percent are focused on MFD collaboration.
- Disbursements in FY21 totaled more than \$20 million, up from \$5.2 million in FY20.

National or in-country activities accounted for 71 percent of accepted proposals, global activities for 23 percent, and regional activities for 6 percent. These figures indicate a strategic focus on effective country-level engagements.

FIGURE 1. PROBLUE Portfolio by Region



Note: AFR is Africa; EAP is East Asia and the Pacific; ECA is Europe and Central Asia; LAC is Latin America and the Caribbean; MENA is Middle East and North Africa; SAR is South Asia.





4. PROBLUE WORK BY REGION

GLOBAL ADVISORY SERVICES AND ANALYTICS

PROBLUE's global work supports two main goals: influencing the international agenda and drawing attention to the foundational aspects of the blue economy and the root causes of the degradation of ocean health. To that end, PROBLUE's global work focuses on improving and developing innovative tools, guidelines, and methodologies to enhance operations and support governments in their decision-making process. The global work that PROBLUE supports is designed based on demand and lessons learned from countries. One of the best examples of this work is the Blue Economy Development Framework (BEDF), which provides a structure under which various policy analyses, capacity assessments, planning tools, and financing instruments are organized to help countries design a blue economy roadmap that is unique to their needs.

PROBLUE supports limited but crucial targeted advocacy work to draw attention to the drivers of unsustainability while maintaining a pragmatic approach and identifying high-level solutions to these drivers. Our work on fiscal reforms and restructuring public expenditures has been organized around World Trade Organization negotiations on reforming fishing subsidies, and we continue to support an international coalition to establish blue natural capital accounting standards. PROBLUE work on decarbonization of shipping feeds into internal policy processes at the International Maritime Organization (IMO). As illustrated above, PROBLUE's global advisory services and

analytics are not ends in themselves but rather are meant to lead to action on the ground, by demonstrating both the costs of inaction and the benefits of blue investment by improving the quality of operations.

In FY21, PROBLUE supported the following global analytical work:

An analysis that outlines pathways for meaningful engagement between the fisheries sector and social protection systems is well under way. This analytical work aims to identify policy measures and instruments that can be leveraged to address losses resulting from temporary or long-term reductions in fishing activity and to generate wider blue economy benefits at the community level. Specifically, it will strengthen fisheries management and build resilience in communities that rely on fisheries. In view of the final deliverable—a toolkit for practitioners and related knowledge-management products—a stock-taking report that forms the basis for a conceptual framework for how various social-protection and labor instruments are used to address covariate risks and vulnerabilities in the fisheries sector has been completed. The team is coordinating closely with the Food and Agriculture Organization of the United Nations (FAO), which is working on complementary initiatives at the interface between social protection and fisheries.

Another cross-GP initiative is development of diagnostic tools and guidance to inform WASH interventions in fisheries, aquaculture, and their value chains to increase health and food





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safety, reduce the spread of COVID-19, and reduce antimicrobial resistance. This work has been undertaken in collaboration with the FAO, which has been contributing technical guidance and been involved in the review of deliverables. (See Box 6 on page 42.)

Also related to health, safety, and antimicrobial resistance is the cross-GP activity on improving the quality and sustainability of investments in the aquaculture sector by promoting and facilitating adoption of best-in-class disease-control and health-management practices. Four streams of activities are included: cost-benefit analyses, stakeholder roundtables, technical assistance, and communication and dissemination. Five countries have been included for cost-benefit analysis case studies covering a range of biosecurity interventions: Madagascar, Mozambique, Peru, Sri Lanka, and Vietnam. The conceptual model and methodology have been developed and aligned with the Global Burden of Animal Diseases initiative. COVID-19 has challenged the original implementation plan, limiting the ability to reach

field teams and country counterparts to collect relevant data and information. In spite of these delays, work has been completed remotely, and data have been collected in virtual sessions with key contacts and informants. In addition, the team has engaged with the private sector in the selected countries to encourage collection of relevant data. The private sector will be further engaged once the stakeholder roundtables have been carried out and will be part of the target audience for the external elements of the communications strategy.

In marine litter and pollution management, PROBLUE's global strategy aims to fill the gaps on knowledge and methodologies and develop decision-making tools to help countries and practitioners, including Bank task teams, understand and design effective, efficient, implementable projects, policies, and packages of interventions to prevent plastic pollution. To that end, PROBLUE supports innovative work to develop tools to help countries identify Pathways out of Plastic Pollution, which is the name of the analysis set to launch

next year. This work will provide three missing methodologies and guidelines to support the critical junctures in plastic pollution prevention and assist the World Bank teams, including the IFC, in policy dialogue and project preparation: a model that helps establish targets for reduction and substitution by estimating the external costs and benefits of 10 plastic products commonly found in the environment and their substitutes; guidelines and lessons learned that help harness the experience of other jurisdictions in implementing and enforcing plastic pollution management policies and learning lessons that are relevant in a country context; and a plastic policy impact simulator that helps multiple national stakeholders negotiate a comprehensive set of policy reforms to create viable market incentives for households and firms to reduce, reuse, recycle, and safely dispose of plastic products. This work will help countries rebuild better and bluer, because it will consider opportunities for job creation along the plastic value chain, setting targets for reduction and substitution of plastic items and simulating the effects of policy reforms to create viable incentives (for households, the private sector, and governments) to address plastic pollution at each stage of the value chain, in line with the principles of a more circular economy. At the end of FY21, the three tasks are under way, developed with pilots and case studies in 14 countries. The Bank is planning to implement these models in FY22 in additional countries as indicated by the high interest expressed by World Bank teams. Because this analytic work is designed to feed into operations, PROBLUE's analytical work will ultimately increase the size and sustainability of the World Bank's portfolio of ocean operations.

The analysis that PROBLUE supported on *Bridging the Gap in Solid Waste Management* has been completed in FY21, contributing to the body of knowledge and experiences in organization and management of municipal

solid waste. A report was prepared and it provides practical information, guidance, and advice to inform and complement the work of national and local authorities and practitioners to reinforce the need for integrated waste management systems at all levels of government. It contains numerous country and city examples from unitary and federal states and exemplifies differences in sector governance across institutional tiers, as well as in low-, middle- and high-income economies to highlight potential solutions in contexts that differ in capacity, resources, services, and objectives. Finally, in FY21, PROBLUE started to develop another global analytical piece (*Behavior Change in Waste Management*) that will help draw global attention to the role and nuances of behavior change in waste management by increasing understanding of potential behavior change solutions that can influence how waste is managed and how to reduce waste at the source.

Blue Economy Development Framework

The BEDF has been instrumental in fostering a better understanding of the ocean economy and identifying the steps required to effect a transition to a blue economy. It consists of three core components: knowledge management; policy, institutional, and fiscal reforms; and fostering investment in the blue economy. A suite of tools, including guidance notes on blue public expenditure reviews, national ocean accounting, and MSP, has been developed to enable client countries to design and implement strategies for blue economy development tailored to their particular circumstances. The BEDF was piloted in Vietnam, India, and Kiribati, and lessons from these pilots have led to a broader understanding of the use of the BEDF toolkit to develop integrated seascape management. As a result, PROBLUE has observed an uptake in interest in and uptake of the BEDF, and support has expanded from the original three pilot countries to 15 countries: Costa Rica, Ecuador, Guinea, Indonesia,

Jamaica, Mozambique, Myanmar, Peru, Tanzania, and in Central America, the Eastern Caribbean, and the Pacific Islands.

National and regional BEDF efforts include diagnostic analyses and tools to inform the development of a blue economy approach, including natural capital valuation in Kiribati and Vietnam and socioeconomic assessments in Guinea, Indonesia, and Tanzania. Central America, Indonesia, Mozambique, Tanzania, and Vietnam are also developing comprehensive strategies that include blue financing schemes (including payment for ecosystem services and private sector engagement), as well as institutional, regulatory, and fiscal assessments, to support development of blue economy action plans linked to MSP activities and ensure sustainable allocation and use of marine resources and space. More detail on FY21 achievements in individual countries is included in the regional sections.

PROBLUE has initiated a collaborative effort with the Finance and Markets team to identify sustainable, replicable blue financing instruments. This initiative will build on the World Bank report *Mobilizing Private Finance for Nature*, which identified monetizing cash flows from the provision of ecosystem services (financing green or blue) and driving better management of biodiversity risks (greening or blueing finance) as two key channels for private finance mobilization. Options considered include coastal ecosystem insurance instruments to enhance climate resilience and restore biodiversity and ecosystem services (financing green or blue) and financing schemes for transitioning to a decarbonized shipping industry (greening or blueing finance).

Marine Spatial Planning

The World Bank is developing financial and technical tools to help its clients reach their

blue economy goals, including MSP, which is the process of designing roadmaps for a blue economy, and to help countries build back bluer. PROBLUE is leading a global effort aimed at illustrating the potential for MSP to strengthen the WBG's ocean economy portfolio. As part of this effort, a knowledge package is being generated that includes three guidance notes on MSP to support client countries transitioning to a blue economy approach. One note illustrates how MSP can help prevent and address user conflicts between current and emerging sectors, account for climate change, and address environmental and social challenges. The other two notes on the economic case for MSP and guidance on data and tools complement the broad guidance note. This focus on MSP aligns with the recommendations of the High Level Panel for a Sustainable Ocean Economy (HLP), which includes the development of Sustainable Ocean Plans. These plans are designed to foster integration between the oceanic sectors on which economic recovery and resilience depend.

Offshore Wind Energy

The Energy Sector Management Assistance Program (ESMAP) is leading a global effort to include offshore wind in the energy sector policies and strategies of World Bank client countries and the upstream work needed to build a pipeline of bankable projects. PROBLUE collaboration with ESMAP is focused on development of an environmental and social framework for offshore wind spatial planning, which supports planning of offshore wind by incorporating environmental and social considerations at an early stage. PROBLUE's funding has been deployed strategically to supplement the offshore wind program's main, but limited, funding from ESMAP by appointing expert consultants to advise on environmental and social factors in the earliest stages of planning and ensure that these are priority topics for World Bank client governments.

BOX 1. Supporting Policies and Investments to Reduce Ocean Plastics in Vietnam

According to McIlgorm, the cost of ocean plastics to the tourism, fishing, and shipping industries in Asia-Pacific Economic Cooperation countries alone was estimated to be \$1.26 billion in 2008, and according to Jambeck and colleagues, Vietnam has the fourth highest rate of mismanaged plastic waste worldwide, producing 0.28 million to 0.73 million tons of plastic marine debris per year. Plastic waste floating in coastal areas or washed ashore on beaches directly affects major tourism areas such as Halong Bay, Da Nang, and Nha Trang, and the Mekong River, which runs through Vietnam, is among the most polluted rivers in the world.

With support from PROBLUE, the World Bank has been supporting the Vietnam Administration of Seas and Islands under the Ministry of Natural Resources and Environment, advising on implementation of the National Action Plan on Marine Plastic Debris Management. As chair of the Association of Southeast Asian National in 2020, Vietnam had a high-visibility opportunity to promote and advance reduction of ocean plastic pollution in the region.

The PROBLUE-supported work has three components, the first of which is finalized.

1) **Diagnostics on Plastic Waste:** Over the past year, the World Bank has supported field surveys of selected riverbanks and coastal sites to determine the extent of plastic pollution and the top 10 polluting items, integrated plastic transport monitoring and analysis (through remote sensing and drone surveys) at selected rivers to monitor plastic waste in waterways that flow into the ocean, and a preliminary analysis of alternatives to Vietnam's most-polluting plastic items. The surveys' results provide an analytical basis for the government (at the national and selected subnational levels) to identify priority plastic items (e.g., the top 10 polluters) to target with policies and investments. This work also developed and piloted an integrated plastics transport monitoring concept for rivers for potential expansion.

Components two and three are nearly complete.

2) **Supporting the Government of Vietnam with a Plastics Policy Roadmap and Solid Waste Management Investment and Reform Analysis:** Under this component, options, recommendations, and a roadmap for plastic policies targeting identified plastic items prioritized for policy measures based on diagnostic work under the first component are reported on, and investment and reform options for solid waste management and plastic waste reduction in three priority municipalities are being identified.

3) **Value Chain and Market Study:** The International Finance Corporation and World Bank have finalized a plastics value chain diagnostic and market study on plastic circularity, with a focus on the recycling sector. The study helped prioritize and drive private sector solutions and investments with a view to promoting management of used plastics as a valuable resource rather than waste. It will be released soon.

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In FY21, IFC assessed several potential nearshore wind farm investments in Vietnam and noticed that these investments would not meet IFC's performance standards, which define client responsibilities for managing their environmental and social risks. This experience helped shape our PROBLUE-funded advisory and assessment activities.

Findings from this work include that a typical 1 gigawatt offshore wind project takes 6 to 8 years to develop and costs around \$3 billion. International financing is therefore required because local banks cannot be expected to bear the financing volume and risks alone.

In addition, the first ESMAP offshore wind roadmap was developed for Vietnam, and PROBLUE-supported activities led to inclusion of two key recommendations in the study: that Vietnam establish development zones through MSP and clear environmental and social impact assessment procedures that adhere to international standards. The roadmap also estimated that offshore wind development in Vietnam could create 700,000 full-time years of employment between now and 2035, add \$50 billion to the economy, and avoid \$217 million metric tons of carbon dioxide emissions. The government of Vietnam is beginning work to incorporate offshore wind into a country-wide MSP supported by the BEDF and ESMAP. This could be the first time the Bank implements the Environmental and Social Framework for Offshore Wind Spatial Planning, which could also generate significant knowledge-sharing opportunities for replicability in other developing countries.

The biodiversity assessment carried out for the Turkey offshore wind roadmap found that many areas that were thought to be well suited to offshore wind actually pose a high risk of harm to critical habitats and endangered species. Findings that will be presented in the final roadmap will inform the government

and stakeholders on previously unrecognized environmental constraints that will exclude development in some areas. This is also helping to inform the design of recipient-executed downstream work to gather offshore data and establish the characteristics of potential sites.

In addition to developing these roadmaps, this offshore wind effort held sessions on environmental and social impacts and MSP during the program's virtual study tour in 2020, which some 400 delegates from 24 client country governments and private sector organizations attended. These included prerecorded videos from World Bank staff, government officials, and private sector experts and meet-the-expert sessions with question-and-answer opportunities. During FY21, country workshops were held with eight client governments (Azerbaijan, Brazil, Colombia, India, the Philippines, Sri Lanka, Turkey, Vietnam). These were the first engagements with these governments on offshore wind and were precursors to commencing roadmap studies. In each workshop, environmental and social factors were presented as important topics in the proposed roadmap scope, and all governments subsequently agreed to include environmental and social factors as topics of investigation in their roadmaps.

The ESMAP team leading this effort is also part of the steering group of the PROBLUE-led MSP. Their engagement ensures dynamic cross-fertilization of offshore wind energy and MSP programs and maintains an active relationship through mutual support. Two PROBLUE webinars have been delivered in collaboration, including the Climate-Informed MSP, held in June 2021.

Sustainable, Resilient Tourism on Small Islands and in Coastal Destinations

PROBLUE is improving understanding of how SIDS and small coastal nations can increase their tourism competitiveness in the wake



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of COVID-19 through more sustainable and resilient tourism practices. Findings from the analytical and research activities are expected to help public and private sector stakeholders understand key topics of new demand trends, circular economy, blue tourism, and sustainability efforts. In FY21, this global analytical effort has generated:

Capacity building in SIDS: Under the blue tourism in SIDS guidance note work that PROBLUE funded, an inventory of 400 tools and resources relevant for stakeholders in SIDS and coastal nations is being developed, as well as a gap analysis comparing its contents with stakeholder knowledge needs. Recommendations on how to design and host a digital platform that will deliver these resources to stakeholders and how to build their capacity to implement sustainable blue tourism will accompany this inventory.

Blue economy best practice for SIDS: This initiative includes an inventory of tools, resources, policies, and best practices on

topics from waste management to nature-based solutions to coastal management as the basis for a digital platform that will be developed in FY22 (with co-funding from other global donors). The platform will make these resources available to governments, businesses, civil society, and all relevant stakeholders. The guidance note provides short-, medium-, and long-term recovery pathways that will help SIDS develop more competitive and sustainable tourism sectors.

Consumer market research: This effort provides governments, national tourism organizations, and the private tourism sector with a deeper understanding of how COVID-19 has affected psychographic behaviors of consumers, including risk profiles, preferred destination types, and activities. The research focuses on three priority tourism markets (Germany, Sweden, and the United Kingdom) to examine trends in core and emerging markets for SIDS. The research provides information on their demographic characteristics and decision-making process

when selecting a holiday destination in the context and aftermath of COVID-19. Profiles of consumers and findings will allow the World Bank to support governments and national tourism organizations in developing specific, implementable marketing recommendations to support short-term recovery and medium-term market diversification.

Assessment of tourism sector circular economy and plastic waste: Concrete recommendations are being produced on the design of public policy and private sector interventions to enable a shift toward a more circular economy in the three target countries, focusing on the sectors and the public-private infrastructure (water, energy, transportation, waste, wastewater management) that can most positively affect the tourism sector.

AFRICA

PROBLUE's engagement in Africa is focused on building country capacity and meeting fundamental needs in many sectors requiring urgent attention, from lack of adequate waste collection in many coastal cities, to the need for technical assistance and capacity building to enable more systematic, regular data analysis and reporting, to decision makers and the public, to inform policy recommendations on essential matters such as controlling fishing effort and access, reducing coastal climate risks, and promoting an integrated seascape management. There is also an opportunity to pave the way for building back bluer in many countries and to leapfrog to a circular economy, as the African Circular Economy Alliance recently illustrated.

On fisheries, PROBLUE is providing support for West African countries to allow for systematic analysis of vessel monitoring data and other sources of information to enable an estimate of total fishing effort so that fisheries management

decisions can be better understood. Doing this for neighboring countries, like Liberia and Sierra Leone, will also facilitate regional collaboration. Likewise, funding is provided for these two countries for technical assistance to help update, finalize, and most notably, implement national plans of action to combat illegal, unreported and unregulated fishing, building on the data and on previous collaboration with the FAO. Work also includes assessing impacts of potential fisheries management measures on local value chains, including on fish supply and employment (not least for women), as well as a targeted public expenditure review to assess the impact of a shortfall in licensing fees. The results of these efforts are feeding into the development of fisheries investment in Liberia and dialogue with the government of Sierra Leone on a potential investment. For Liberia, PROBLUE-supported activities extend to cross-pillar work on marine litter reduction and prevention, including for determining inland plastic pollution hotspots and marine litter composition in selected coastal areas, complemented by an assessment of the plastic value chain and the potential for reduction, reuse, and recycling in key sectors, including abandoned, lost, or otherwise discarded fishing gear.

In addition to these initiatives, PROBLUE is supporting coastal resilience efforts associated with nature-based solutions, particularly mangrove protection and restoration, and beach and shoreline stabilization. In The Gambia, Ghana, Guinea, and Senegal, PROBLUE has supported awareness of climate change and the benefits of hybrid solutions promoting nature-based solutions and land and coastal use planning. Linkages between ecosystem conditions, coastal risks, waste management, and public health has been a priority that continues to grow with the sense of urgency to take action. The Gambia is a small, fragile coastal country with limited access to financing; because of PROBLUE's support, the Bank has strengthened its engagement in the country

BOX 2. Sustainable, Resilient Tourism on Small Islands and in Coastal Destinations

Tourism is one of the largest, fastest growing sectors of the ocean economy, comprising 26 percent of the total value of the ocean economy in 2016, according to the OECD. This is driven by coastal, marine, and nature-based tourism activities that contributed \$390 billion to global gross domestic product (GDP) and supported more than 6.5 million jobs in 2010. Among blue tourism destinations, small island developing states (SIDS) and small coastal destinations provide unique experiences for travelers, allowing them to explore diverse marine ecosystems, relax on pristine beaches, and discover cultures built around the oceans. In exchange, tourism creates an engine of economic growth, generating jobs, supporting small and medium enterprises, and earning more than \$50 billion in exports for SIDS each year, according to the World Trade Organization.

The COVID-19 crisis essentially halted tourism to SIDS in 2020, as many closed international borders to protect their populations and preserve the capacity of their healthcare systems. The United Nations Conference on Trade and Development found that SIDS experienced a 70 percent reduction in travel receipts in 2020, driving an estimated 9 percent reduction in GDP. Emerging research suggests that health and hygiene measures to address COVID-19 have increased consumption of water, single-use plastics, and cleaning chemicals that are harmful for delicate island ecosystems, although the pandemic seems to be creating new opportunities, with initial market intelligence indicating that the crisis has put premiums on destination health and safety and increased interest in sustainable and nature-based tourism.

With PROBLUE's support, the World Bank is exploring the opportunity to rethink and adjust tourism management in SIDS and create strong foundations for healthy, sustainable, resilient destinations. Cutting across PROBLUE pillars 2, 3, and 4, the project is creating global knowledge for all SIDS while piloting specific activities in three West African countries: Cabo Verde, the Gambia, and São Tomé and Príncipe.

The project is helping SIDS increase their tourism competitiveness in the wake of COVID-19 by developing knowledge, guidelines, and digital training and supporting innovation for enhanced competitiveness of the sector. The project will help mitigate adverse environmental impacts of adaptation to COVID-19 health standards at the business and destination level. In the first year, the World Bank has explored sustainable recovery pathways for SIDS to reinvigorate their blue economies and developed a comprehensive database of policy tools and resources for their governments. To investigate new demand trends, the World Bank launched new consumer market research to quantify the impacts of COVID-19 on consumer preferences regarding sustainability, nature-based tourism, and health and safety. The results will support development of new guidelines and standards for businesses, blue tourism product development, and dynamic marketing strategies in the pilot countries.

In the coming year, the World Bank will conduct tourism sector circular economy and plastic waste assessments in each of the pilot countries, create guidelines on the circular economy and environmental sustainability in the tourism sector for COVID-19 conditions, and provide tourism training for enterprises with a specific focus on female owners and employees. The project will end with design of a blue economy innovation competition for tourism entrepreneur financing with a focus on female entrepreneurs.

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and deepened Bank–government dialogue on urban and coastal resilience. In addition, there is increasing interest in nature-based solutions and marine pollution, which is mobilizing other active development partners sharing similar concerns.

In Guinea, PROBLUE is supporting implementation of a BEDF effort to address significant data gaps in coastal ecosystems and consolidating sectoral data. The partnerships established through this effort with the National Aeronautics and Space Administration; the European Space Agency; and various sectors including environment, agriculture, fisheries, and mining have supported production, identification, and compilation of a series of baseline datasets essential to initiating a constructive process of integrated marine and coastal planning in Guinea in the first half of 2022. This work is also strengthening the integrity of mangroves as part of Guinea’s strategies for climate change mitigation and adaptation, including its updated NDC.

PROBLUE continues to support cooperation among West African countries for mitigation of regional pollution through analytics and dialogue. For example, the regional plastic value chain and policy framework, including private sector opportunities for a circular economy approach, is being analyzed, and the true economic costs associated with marine litter caused by plastics in countries in West Africa is being evaluated to inform policy options and regional engagement activities. Stakeholder engagement processes are also supported with the National Plastic Action Partnership platform in Ghana, where PROBLUE is funding a value chain diagnostic that will complement and inform an active investment project financing on solid waste management in Accra by including the plastic management perspective, as well as social aspects (such as impacts and opportunities for waste pickers) and job creation, by unlocking private sector investments. Similarly, we are enabling joint work with IFC in Nigeria to engage with the private sector to identify opportunities for

expanding recycling efforts by implementing circular economy business models while improving working conditions in the informal sector and assessing possible solutions to prevent plastic pollution along the value chain.

PROBLUE supports strategies to reduce plastic consumption and improve waste management systems in Senegal, Sierra Leone, and Tanzania, with the focus on improving urban planning and governance to stop leakage into the oceans.

Ongoing work in South Africa in support of improvement in solid waste management and development of a circular economy, drawing on Africa's unique circumstances, is expected to set examples and allow lessons to be shared with neighboring countries.

As part of the cross-pillar PROBLUE-supported Mozambique PROBLUE Program (MozAzul) activity, a study was undertaken to help the government of Mozambique identify public

BOX 3. COVID-19 Response in Nigeria

Nigeria generates 1.15 million tons of recyclable plastic waste per year, with only about 6 percent recovered. Lagos being the most populous coastal city in Africa with more than 24 million residents generates 4.13 million tons of solid waste. Of the entire solid waste generated yearly in Lagos, 13 percent is recyclable, of which 23 percent is plastic waste.

Lagos, the epicenter of the COVID-19 pandemic in Nigeria, recorded a drastic increase in plastic waste generated from health care facilities and use of personal protective equipment in isolation centers, exacerbating the plastic waste problem in Nigeria due to the lack of adequate solid waste facilities. Recent demand for health services to counter the pandemic will increase plastic waste generation and contribute to marine plastic pollution if not managed properly.

PROBLUE is helping the World Bank develop a knowledge base in Nigeria to increase the capacity of Lagos State residents to reduce marine plastic pollution by promoting sustainable plastic management (reduce, reuse, recycle). An assessment is underway on the impact of COVID-19 on health care facilities' use of plastics. Initial findings from the review of existing policies and practices to address health care facilities' plastic waste management show a lack of policies and guidelines specific to plastic and limited requisite knowledge.

Field assessments will be conducted to provide the quantitative and qualitative data needed to engage stakeholders and support a circular economy.

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policies and expenditures that can leverage sustainable private sector investment in capture fisheries, aquaculture, and mangrove protection. This comprised a component on gender equality in Mozambique's fisheries sector, including recommendations on how to increase access by women to value chain development opportunities. The study will inform the update of the 1996 National Fisheries Policy, expected to be finalized in 2022. MozAzul has enabled the design of the fisheries and blue economy components of two new operations, approved in June 2021. The program has engaged several private sector actors from diverse blue economy industries, including tourism, mining, and fisheries. In FY21, the government, with support from PROBLUE and following the BEDF approach, finalized the action plan for Mozambique's BEDF and delivered the guidance document *Financing Mechanisms for Sustainable Blue Economy Development in Mozambique*. Part of this activity included analytical work on marine plastics (national marine litter analysis, policy assessment, circular economy study) and a plastics social innovation process, which will be concluded in the first half of FY22.

In Tanzania, PROBLUE is supporting an innovative gender approach to address plastic pollution. This effort is assessing the roles of women and men as agents of change in reducing plastic pollution. Sex-specific research on the impacts of plastics on human health, particularly on the exposure of the labor force to hazardous chemicals in the plastics industry, is intending to unveil the gender-related risk assessment for men and women. This national effort is also exploring the roles of women and men in reducing the impacts of plastics on the environment, especially the marine environment. This activity is making recommendations on measures to formalize informal waste management and actions to improve women's livelihoods and increase their participation in economic opportunities and decision making in

waste generation management. The Tanzania effort is also applying the BEDF to set the baseline for development of a marine spatial plan. Recommendations generated under this BEDF work are focused on decision-support tools, which will include suggestions for development of national blue natural capital accounting and an inclusive stakeholder engagement plan for establishing the process for forming an action plan—especially for MSP. This PROBLUE-funded activity will also support regional MSP and nature-based solutions including restoration of mangroves and coral reefs and rehabilitation of shorelines with resilient indigenous trees and grasses.

EAST ASIA AND PACIFIC

In FY21, PROBLUE accelerated its support to East Asian and Pacific countries in addressing marine plastic pollution, furthered the production and harvesting of seafood, and helped develop the sustainable tourism sector.

Perhaps the most noteworthy cross-sectoral initiative in East Asia and the Pacific is the programmatic intervention for Pacific island countries. This holistic program aims to enhance understanding and inform policy and investment options to respond to some of the biggest environmental challenges affecting sustainable development in Pacific island countries and will inform development of the blue economy in 12 SIDS in the Pacific region. PROBLUE assists in developing regional and national strategies in each of the three main areas of fisheries, ecosystem management, and sustainable tourism (which covers biodiversity and conservation management, climate change and nature-based solutions, and sustainable tourism, with a focus on nature-based tourism) and pollution (with marine plastics as the primary initial focus). In its first year, it became an ambitious, strategically important program through engagement with

BOX 4. Charting a Blue Economy Path for Indonesia

With more than 17,500 islands and three quarters of its jurisdiction marine, Indonesia's oceans are central to its prosperity. Indonesia has the world's second-largest fishery sector, contributing \$27 billion to GDP and 7 million jobs, but there are challenges that threaten the benefits derived from oceans, with 37 percent of fish stocks overfished, continued loss of mangroves, and one-third of coral reefs in poor condition. The government is working to address these challenges.

With support from PROBLUE, the World Bank has been helping the government increase the knowledge base and technical capacity for blue economy policy development. The PROBLUE-supported work is delivering policy options for strengthening the fisheries management system, charting a roadmap for more effective blue finance, and formulating climate change adaptation measures for the fisheries sector. The work supports the Oceans for Prosperity investment project currently in preparation, which aims to strengthen marine and coastal resource management and improve coastal livelihoods.

Climate change is an important focus of this work, given Indonesia's vulnerability to ocean warming and extreme weather events. Without adaptation, the fisheries sector and coastal communities will experience loss and damage. With the support of PROBLUE, a partnership between the World Bank, Packard Foundation, University of British Columbia, and University of Bern is working with the government to quantify climate change impacts on marine fisheries and coastal communities and exploring adaptation options. Preliminary modeling shows that key stocks—important to large- and small-scale fishers—are exposed to climate hazards and in the next few decades, may see reduced catch. Diverse adaptive options are being co-designed at consultation workshops with stakeholders, including protecting and restoring coral reefs and mangroves that support fish habitats, improving fisheries management, increasing social security and alternative livelihood support for fishers, and building flexibility into supply chains. Options to inform investments such as Oceans for Prosperity over the next 12 months and climate-sensitive policy development in the longer term are being developed.

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clients (national governments and regional agencies) and development partners as a critical part of ensuring the relevance of the activities that will unfold in FY22. This region is implementing the first PROBLUE-funded blue port activity, aiming at enhancing the environmental sustainability and resilience of Pacific island ports. This effort is developing a 10-indicator tool for environmental sustainability to enhance country capacity such that local stakeholders are better equipped to plan, construct, manage, and maintain port infrastructure operations sustainably. These indicators include greenhouse gas emissions, energy and efficiency, climate change resilience, noise, vibration and light pollution, liquid and solid waste, and biodiversity. This blue-green port effort will develop recommendations for increasing the sustainability and preparedness of Pacific island ports.

The region has continued to be at the forefront of the marine plastic agenda despite the challenges that many countries face in managing COVID-19. The pandemic has

created a surge in plastic consumption and has presented difficult short-term choices between health and the environment, resulting in greater use of single-use plastics and greater production of medical waste, which can end up in the oceans. In FY21, PROBLUE financed studies aimed at improving solid waste management; developing recycling markets; and undertaking policy reforms analysis, including for development of a more circular economy and green growth.

Even though studies and data collection have been delayed because of various travel restrictions and lockdowns, many of the analytics that began two years ago have been delivered; in FY21, more than 15 reports, toolkits, and guidance documents were completed for the region and at the country level in Malaysia, the Philippines, Thailand, and Vietnam. At the regional level, momentum was strengthened across Association of Southeast Asian Nations (ASEAN) member states by supporting development of the ASEAN Regional Action Plan for Combating Marine Debris—now endorsed

by all 10 countries—and supporting numerous dissemination activities and stakeholder engagement processes, such as three regional stakeholder meetings on the ASEAN Regional Action Plan, the high-level event *Marine Plastics in East Asia and the Pacific: Crisis and Opportunity in November 2020*, and the joint World Bank–United Nations Environment Programme (UNEP) workshop on measuring plastic pollution in March 2021. In addition to the regional action plan, marine plastics and gender were studied, and recommendations were made for marine plastic management in Southeast Asia, building on consultations with six countries. A toolkit was also prepared that analyzes the suitability of plastic pollution assessment methodologies to inform regional harmonization in the approach to plastics pollution assessment and an options paper on the implications of the Basel Convention plastic waste amendments on ASEAN countries, to help inform regional action relating to ASEAN plastic waste trade and ensure effective implementation of the Basel Convention.

PROBLUE also supported development of a broad set of analytical activities at the country level that government and stakeholders recognized were critical elements to inform and target policies and investments to combat marine plastic pollution, seeking strategic entry points for policy support. Key outputs were achieved in FY21 in Malaysia, the Philippines, and Thailand, including a material flow analysis; a framework for determining available technology for plastic management and solutions for reducing plastic waste on small and remote islands; a study on the role of extended producer responsibility schemes toward circular economies in Asia-Pacific Economic Cooperation; and assessments of policies and regulations. Also, in Malaysia, the Philippines, Thailand, and Vietnam, the IFC and the Bank have jointly identified root causes of recycling market failures and developed recommendations to improve framework

conditions, for example, with regard to recycled content targets and standards for food-contact applications. In Vietnam, field surveys conducted on river banks and at coastal sites to determine the extent of plastic pollution and identify the top 10 polluting items provide the analytical basis for the government to identify the priority plastic items to target with policies and investments. Part of the activity supported by PROBLUE aimed at developing and piloting an integrated plastics transport monitoring concept for rivers for potential expansion using remote sensing and drone surveys.

Similarly in FY21, PROBLUE supported development of a national plastics roadmap and action plan in Lao People's Democratic Republic by helping identify the plastic types and geographic areas that should be prioritized for policy measures and interventions, conducting a survey of product alternatives, and devising a set of recommendations on policies and regulatory instruments to reduce single-use plastics and improve plastics management. In Cambodia, PROBLUE funding has directly influenced design of the Bank-financed investment project on solid waste and plastic management by financing assessments of the status of solid waste management infrastructure and services, technical and economic prefeasibility assessments, and preliminary environmental and social analysis of investments in the identified activities. This funding also enables ongoing engagement and support of the government in developing plastic policies to address priority plastic items and reduce plastic leakage into the environment, including pathways to rivers and oceans. In addition, preliminary findings of studies conducted in China have provided background diagnostics that informed preparation of the China Plastics Waste Reduction Project (approved in FY21) and will further inform implementation of the project. Further work is focused on better understanding the role that main rivers in China

play in the transmission of plastics, including microplastics, to oceans and the use and fate of plastics in agriculture.

Work was developed in FY21 that will start in FY22 to increase understanding of the vulnerabilities that informal-sector workers face and to identify resulting opportunities for community-level jobs from plastics recycling, upcycling, and alternative materials in Indonesia, the Philippines, and Vietnam. The region is also leading on the important issue of abandoned, lost, or otherwise discarded fishing gear at the intersection of marine pollution and fisheries, which is receiving increasing interest with little knowledge of the magnitude of the problem and how to solve it. FY21 was a turning point as PROBLUE approved funds to start work with transformative potential for the fisheries sector and plastic gear use in the Pacific, with engagement at the regional level, diagnostics at the country level, and pilots in four Pacific island countries that will then be expanded to the whole region. Work is also starting in Vietnam, and it is expected that these early engagements will help pave the way for developing guidance and build on further engagements in countries, including by engaging with the transport sector on ports.

Significant progress has been made in the cross-pillar (1, 2, and 3) intervention for development of sustainable fisheries in Vietnam, informing the policy framework and investments. Several sizable consultancies were initiated, including on “blue” fishing ports, to assist with strategic, sustainable fishing port investment to be supported by the upcoming Sustainable Fisheries Development Project; addressing marine plastic pollution from the fisheries sector through policy analysis, baseline data collection, and measures to be implemented under the Sustainable Fisheries Development Project; assessing Vietnam’s fisheries information management system and designing upgrades in view of an electronic

catch documentation scheme; increasing sustainability in Vietnam’s fisheries policy framework, focusing on stock-assessment capacity, quotas on fishing licenses and catch, fleet-capacity adjustment planning, and national guidelines for co-management; and supporting greater private sector engagement in sustainable aquaculture development (including shrimp value-chain analysis; carbon and environmental footprint assessment of various shrimp-production systems; strength, weakness, opportunity, and threat analysis for select mariculture commodities; and a private sector roundtable).

Vietnam was also one of the first three pilot countries for implementation of the BEDF tool. This activity conducted three studies to support and inform Vietnam’s efforts to promote resilient coastal economies. One activity involved developing guidance to strengthen the tools used in implementing—valuing ecosystem services and determining suitable coastal protection corridors. Another activity involved examining opportunities to involve the private sector in supporting sustainable aquaculture and assess the importance of complying with measures to address illegal, unregulated and unreported fisheries in Vietnam. The third activity involved preparing a report that clarifies the concept of a blue economy in Vietnam’s context and shares international experience in implementing a blue economy. The outputs associated with these three activities are part of continued engagement and commitment from the World Bank to support the government of Vietnam in boosting resilient coastal economies.

The initiative on supporting sustainable fisheries development and resilient coastal economies in the Philippines has progressed well. Several analytical outputs contributed to achieving the development objective, which is to improve the knowledge base for

the country's fisheries sector and inform the design of the upcoming Fisheries and Coastal Resiliency project. In FY21, a number of assignments were fully or largely completed, including: institutional capacity assessment for the Philippines government agency to implement the Fisheries and Coastal Resiliency project; development of a model fisheries management plan to be adopted at the fishery management area level under the Fisheries and Coastal Resiliency project; evaluation of sectoral performance focused on key capture-fishery and aquaculture commodities in two fishery management areas to be supported by the Fisheries and Coastal Resiliency project using fishery and aquaculture, value-chain and associated post-harvest-investment needs assessment for the two fishery management areas; and a fisheries climate-vulnerability assessment for select species value chains. Regarding coastal resilience, an institutional assessment for coastal investment planning was completed, and another consultancy, supporting coastal hazard risk assessment and infrastructure investment planning (focused on high-risk geographic areas), was launched.

In Indonesia, PROBLUE is helping increase the knowledge base for development of the blue economy using a BEDF approach. As part of this effort, support is provided for informing climate-change adaptation measures for fisheries management through a quantitative assessment of climate vulnerability for specific commercial stocks at subnational levels. This study shows that fisheries in Indonesia's waters are exposed to large climate hazards and will be highly vulnerable in the next few decades and indicates that Indonesia has limited adaptive capacity to address these impacts. This effort is in line with the coastal resilience and marine protected areas management actions aimed at improving livelihoods through mangrove restoration in key locations. More broadly, PROBLUE supported development of a blue finance advisory committee to

provide advice and coordinate intersectoral and interagency efforts to promote and move forward the blue finance agenda.

Lastly, the Bank's dialogue with Myanmar in areas related to coastal development, plastics, fisheries, and climate action revealed challenges and opportunities for establishing a more sustainable and inclusive coastal blue economy. Activities that PROBLUE supported were designed in response to the government's requests for advisory and capacity-building support related to sectoral policy and institutional reform; aquaculture, fisheries, and coastal-resources management planning; marine plastics reduction; and climate change. These critical thematic dialogues were intended to fill some of the priority knowledge and capacity gaps for a long-term holistic vision and roadmap for blue economy development, laying the foundation for potential investment lending opportunities. The knowledge generated can inform potential investment opportunities if and when conditions allow for renewed engagement by the Bank with the government of Myanmar.

EUROPE AND CENTRAL ASIA

PROBLUE's continued engagement in the marine pollution agenda in the Black Sea to address the myriad challenges faced and multiple sources of pollution has been successful in influencing the regional agenda. With many consultations with stakeholders in Bulgaria, Georgia, Moldova, Turkey, Romania, and Ukraine, understanding the baseline of marine pollution in those countries demonstrates how much efforts for rehabilitation of the Black Sea should be strengthened, regional and national coordination reinforced, and measures to address increasing pressure from eutrophication developed to avoid thorough destruction of this semi-enclosed sea. The country diagnostic reports and the regional pollution diagnostic will provide a holistic analysis of the cross-

BOX 5. Banking on Protected Areas

Brazil and Fiji are two of the world's most sought-after destinations for coastal tourism. Tourists are drawn to these countries' pristine protected areas with coral reefs, clear waters, and rich biodiversity that help spur economic activity that supports local businesses and helps communities thrive. Nevertheless, these protected areas are often under threat; more than two-thirds of the world's oceans suffer from human impact, as habitat loss and degradation, pollution, exploitation, climate change, and invasive species drive catastrophic biodiversity losses.

With PROBLUE's support and in partnership with the governments of Brazil and Fiji, the World Bank is helping these countries and other stakeholders uncover the direct and indirect benefits of protected area tourism to strengthen the economic case for promoting sustainable, inclusive tourism in protected areas, help countries recover from the economic fallout of the pandemic, address longstanding development challenges, and conserve biodiversity. Synthesized in the global report, *Banking on Protected Areas: Promoting Sustainable Protected Area Tourism to Benefit Local Economies*, an innovative economic modeling approach is used to measure simulated, direct, and spillover impacts of tourism on communities. This research finds that tourism in marine protected areas benefits communities by generating income multipliers of 1.74 in Brazil and 1.83 in Fiji, delivering broad benefits that help the poor, creating job opportunities for thousands on Brazil's Whale Coast and Fiji's Mamanuca Islands, and yielding high economic returns on public investment. Although these benefits are significant, costs to communities of protected areas must be managed.

The findings from these efforts are designed to support governments as they face the challenge of economic recovery from the pandemic. Policy recommendations for decision makers are built around three pillars and include:

- **Protect the Asset:** formalize protected areas, increase public investment in protected area management, build capacity of protected area managers, and monitor visitors and impacts.
- **Grow and Diversify the Business:** diversify tourism offerings and develop concessions policies to promote private sector participation.
- **Share the Benefits:** formalize benefit sharing, strengthen income multipliers, and mitigate and compensate for lost income for local communities.

A global report launched on June 14, 2021, has been well received. This work to foster positive economic and environmental outcomes around marine protected areas continues, shaping the way the World Bank supports country efforts to promote protected area tourism to benefit local communities.

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cutting regional socioeconomic, environmental, policy, legal, and institutional aspects of Black Sea marine pollution, filling important gaps not only in knowledge and policy, but also in investment and innovation, by identifying potential economic and innovation opportunities and related financing instruments. During FY21, PROBLUE expanded its engagement in the region to support Albania in its efforts to explore market-based instruments, such as extended producer responsibility and deposit refund schemes, while also boosting jobs and consolidating lessons learned to help lower-income countries in their efforts to cost-effectively collect plastic value chain data and establish monitoring systems.

LATIN AMERICA AND THE CARIBBEAN

Latin America and the Caribbean comprises mostly high and upper-middle income countries, but an important subset of the countries in the region are small; particularly vulnerable to climate change; and constrained by a limited resource base, weak governance, or both. Addressing the development priorities of these smaller, more vulnerable countries has been PROBLUE's focus.

In the Caribbean, the multi-pillar activities establishing the analytical foundation required to address key challenges across ocean sectors in select countries of the Organisation of Eastern Caribbean States—including Antigua and Barbuda, Dominica, Grenada, St. Lucia, and St. Vincent and the Grenadines—to inform the Bank's *Unleashing the Blue Economy in the Eastern Caribbean* project and future initiatives, are progressing. Following inception activities to foster collaboration with and between the Organisation of Eastern Caribbean States Commission and member states, sectoral assessments have informed the *Unleashing the Blue Economy in the Eastern Caribbean* project appraisal document, helping identify

policy gaps, potential organizational reforms, and capacity and infrastructure needs to be addressed in the region. For example, the assessments have identified key vulnerable and exposed fisheries landing facilities that may need upgrading and protection.

PROBLUE is supporting a regional initiative on solid waste management and marine environment protection, which aims to develop strategic solid waste management in four countries in the Caribbean (Dominica, Grenada, St. Lucia, St. Vincent and the Grenadines) and identify potential regional solutions to address land-based sources of pollution for specific waste streams, in particular plastic waste. Similarly, in Central America, PROBLUE supports activities aimed at improving solid waste management in El Salvador and Honduras and a pollution diagnostic in the Gulf of Fonseca (which borders El Salvador, Honduras, and Nicaragua) to help advance the dialogue on regional monitoring and pollution management systems. In FY21, PROBLUE also approved funds to help increase coastal resilience in Cap Haitien, on the north coast of Haiti, including addressing solid waste management problems, and in Jamaica, where urban interventions will range from waste removal devices in waterways to upstream interventions in behavior change, opportunities to increase recycling, and identification of opportunities for substitutions for or alternatives to single-use plastic products.

Uptake of BEDF efforts in Latin America and the Caribbean has been significant. In FY21, PROBLUE approved funds for Costa Rica, Ecuador, El Salvador, Honduras, Jamaica, and Peru. These BEDF efforts address data, analysis, and dissemination to enable decision making for optimal blue economy development. In Jamaica, and Central America, the BEDF helps countries develop MSP processes. Capacity-building efforts are at the heart of these BEDF efforts to create awareness of the blue economy, promote the use of nature-based solutions to boost

coastal resilience, and conduct training on blue natural capital accounting.

BEDF support in Jamaica and Central America will also include implementation of a blue public expenditure review, with the aim of identifying the financial gaps and challenges when blue economy projects are implemented. These BEDF initiatives are identifying opportunities for the use of innovative financing instruments (e.g., blue bonds, debt-for-environment swaps) that can accelerate implementation of blue economy investments, with a deep look into key financing strategies tailored to specific sectors such as tourism and fisheries. The BEDF effort includes implementation of a pilot payments for marine ecosystem services scheme in Central America and the preliminary design of a pilot program related to identified areas and blue economy sectors in Jamaica.

MIDDLE EAST AND NORTH AFRICA

PROBLUE engagement in the Middle East and North Africa has been limited, given the demonstration value needed for operations in upper-middle-income countries. PROBLUE efforts have emphasized regional approaches and focused on countries affected by fragility, conflict, and violence (FCV).

Despite multiple challenges in Gaza and the West Bank, follow-up activities to the previously PROFISH-supported initiative have progressed, and the counterparts have confirmed their continued interest. On the sustainable development of fisheries and aquaculture, the team has initiated a study that is looking, among other things, to identify best practices on climate-resilient aquaculture (including mariculture) and existing data gaps, paving the way for more detailed value-chain analyses. Preliminary results indicate that mariculture has continued high potential for future growth in the Gaza strip. On plastic pollution, PROBLUE

is supporting development of a study on the plastic value chain to understand the quality of the material sorted and to develop a plastic recycling and reusing strategy; activities are still at the planning stage, in coordination with the Gaza Solid Waste Management Project. The team is coordinating closely with the rapid damage and needs-assessment interventions planned for Gaza, including to help identify job-creating activities for the conflict-affected people in Gaza and the West Bank.

PROBLUE support of efforts to reduce marine pollution in the region has progressed significantly in FY21, including in Morocco and Tunisia, where a successful co-constructive process to develop national strategies to address marine plastic pollution helped advance the dialogue on future investments and policy reforms. In Morocco, this work helped formulate a Program-for-Results Financing operation that includes implementation of the Littoral Sans Plastique (Plastic-Free Coasts) strategy developed with PROBLUE support. In Tunisia, PROBLUE helped create a core constituency among critical stakeholders on marine plastic pollution and started developing its national Littoral Sans Plastique strategy. Both Littoral Sans Plastique strategies include action by the private sector as a result of active engagement in the process and specific studies to identify opportunities to establish a mechanism for private sector involvement in waste collection. In Egypt, PROBLUE is helping design community-based pilots in identified hotspots, engaging with the tourism sector and the private sector through a partnership with IFC. The results of this work will inform the recently approved investment project financing on air quality and pollution management that has a strong component on solid waste management. In Lebanon, which has been affected by FCV, we are supporting identification of marine pollution sources and hotspots in the Litani Basin area to inform preparation of an action plan to address

marine pollution that has implications for climate change, poverty, and livelihoods.

SOUTH ASIA

FY21 was a key year for South Asia, with approval of a series of promising multisectoral proposals, some of which should start generating results in FY22. There is a focus on pollution in large coastal cities, with strong uptake on marine plastics, tourism, and desalination in SIDS. Fisheries are also an area of special concern and interest, and a growing loan portfolio is likely to drive further PROBLUE support and investment in the sector.

Uptake of the marine plastic and litter agenda took off last year in South Asia, and the region is at a turning point for prevention of marine litter and plastics. Countries have been expressing growing interest over the past 2 years, fueled by national commitments and demands, and interest has also been growing at the regional level in support of national action plans that have been developed in countries. As a demonstration of this dynamic environment, at the end of FY20, the Bank approved a regional project on plastic-free rivers and seas to support the South Asia Cooperative Environment Program and, in recent months, a solid waste management project in Kerala State in India, combining investments in infrastructure and policy reforms informed by assessments and policy analysis of waste and the circular economy that PROBLUE has supported.

Significant progress was achieved in ongoing engagements in the marine pollution agenda during FY21 that have informed action plans and helped identify key interventions to build an enabling environment for better solid waste management and the circular economy. For example, in Bangladesh, PROBLUE supported development of the Action Plan for Sustainable Plastic Management, elaborated

in dialogue with the government and private sector, that will be used to identify investment opportunities and mobilize finance for waste management through a \$250 million International Development Association Project. PROBLUE also supported a “plastic circularity” innovation challenge whose winners have received funds from varied sources to develop their ideas. In response to the COVID-19 crisis, during FY21, additional support was provided to Bangladesh to increase understanding of investment and regulatory priorities for management of medical waste in Dhaka (Box 6, page 42). In Maldives, work has started at the intersection of gender, jobs, and the circular economy by engaging with women’s development committees to test and explore business models for alternatives to single-use plastics and to increase community and kitchen composting to promote waste source segregation. Other circular economy activities supported in the country include extended producer responsibility pilots and behavior change, complementing three existing lending operations.

Also in Bangladesh, an initiative to enhance transparency and accountability in the fisheries sector was initiated with PROBLUE support, with the goal of reducing illegal domestic industrial-fleet fishing, increasing safety at sea for artisanal fishers, and improving the social and economic status of women for the benefit of livelihoods and adaptive capacity of coastal fishing communities. The Fisheries Transparency Initiative (FiTI) International Secretariat has been engaged and delivered an initial presentation to the Department of Fisheries on proposed work on public disclosure of fisheries management information, although because of COVID-19 lockdowns in Bangladesh, wider consultations to stimulate interest of all relevant stakeholders have been limited. A stock-taking desk study assessing publicly available resources is underway, and other activities, including

BOX 6. Responding to COVID-19: Bangladesh Environmental Sustainability and Transformation Project

PROBLUE is supporting the Bangladesh Environmental Sustainability and Transformation Project in its preparation phase to increase understanding of investment and regulatory priorities for management of medical waste in Dhaka, Bangladesh. Dhaka faces overall challenges in waste management because of limited investments in infrastructure and inability to provide affordable services. Medical waste management is even more problematic because it involves highly infectious and hazardous waste and demands a robust system to regulate its generation, separation, collection, transportation, treatment, and final disposal. With 9 million people in its city limits and an additional 12 million in its metropolitan area, Dhaka has a nongovernmental organization–led system to manage a portion of its medical waste. The COVID-19 pandemic has exacerbated the insufficiency of the existing system by rapidly escalating generation of plastic waste. With the help of PROBLUE, the Bangladesh Environmental Sustainability and Transformation Project will implement a baseline assessment to help explain the current status of medical waste management in Dhaka, a gap analysis to determine improvements needed, and capacity building to allow all stakeholders to increase their understanding of gaps in medical waste management and proposed recommendations to address them.

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on industrial fisheries licensing models and technology solutions and interagency coordination for coastal fisheries monitoring and surveillance, are being planned.

As has been the case in most countries during the pandemic, PROBLUE-funded activities in Pakistan have been delayed, but despite the challenges, progress is well underway across all four pillars with preparation of terms of reference; recruitment of consultants; and preparation of inception reports for fish, value chains, pollution management, blue tourism,

and the Blue Economy Development Roadmap (following a BEDF approach). Perhaps the most notable achievement has been the just-in-time blue carbon rapid assessment, highlighting the importance of Pakistan's blue wealth and adaptation potential to help initiate translation of the nation's broad development goals into blue potential in economic values. The purpose of the blue carbon rapid assessment is to help the government enhance its commitments in the revised NDCs through blue carbon ecosystems and to prepare for the next round of revisions to mitigating climate change. More

specifically, national and provincial reviews of blue ecosystems' climate-change mitigation and adaptation policies and regulation have concluded that blue carbon has great potential for the upcoming NDC revision. The blue carbon assessment has provided model language and policy recommendations to the Ministry of Climate Change, and a roadmap for blue carbon action and finance will be considered.

Priorities for sustainably managing Sri Lanka's marine fisheries, coastal aquaculture, and the ecosystems that support them is a cross-pillar (1 and 4) advisory services and analytics initiative. COVID-19-related mobility restrictions and curfews have hampered this effort, severely constraining field work. Nevertheless, a comprehensive report has been produced analyzing the challenges and opportunities that Sri Lanka faces for the sectors' contributions to sustainably enhancing export revenues, employment, and food security. Based on the analysis, the report offers a vision for the sectors and recommends a program of priority public investments, policy actions, and institutional development that would help Sri Lanka realize that vision. A key recommendation is on mobilizing finance for investment, for which public investments, consistent with the country's medium-term macro fiscal strategy, would enhance the productivity of small- and medium-sized enterprises and mobilize more private capital.

PARTNERSHIPS

PROBLUE has continued its close collaboration with development partners, UN agencies and other intergovernmental bodies, academia, and nongovernmental organizations. One prime example is the extensive cooperation with the FAO on analytical work on fisheries and aquaculture—including on WASH and social protection measures and development and implementation of the Fisheries Sector

Assessment Toolkit, elaborated to facilitate Bank task teams' and client countries' systematic stock taking of the fisheries sector for better design, preparation, implementation, and evaluation of fisheries operations. In addition, PROBLUE's support for better fisheries governance and management through greater transparency and accountability has continued through engagement with the FiTI. The fisheries subsidies reform agenda is another topic on which PROBLUE has been in dialogue with a wide range of stakeholders to identify areas where client countries may benefit from dedicated technical assistance and capacity building to support implementation of new rules on fishery subsidies; this includes the World Trade Organization and the Pew Charitable Foundation.

Plastic pollution prevention is a crowded space, with many initiatives led by UN institutions, governments, and the private sector. During FY21, the World Bank strategically followed some of the dialogues and actively engaged with relevant partners to discuss current trends and anticipate opportunities for cross-collaboration and timely support to countries. We explored joining efforts with UNEP and IMO to map port reception facilities and assess their capacity, one of the key knowledge gaps in understanding the magnitude of the abandoned, lost, or otherwise discarded fishing gear problem, while also bringing a circularity perspective to the solutions and pilot work. PROBLUE is actively engaged with the PREVENT Waste Alliance, an initiative of the German Federal Ministry for Economic Cooperation and Development (BMZ); PROBLUE work was presented during an event in 2020. The work that PROBLUE supported is also included in World Bank updates on marine litter to the G20 process on marine litter prevention, an initiative led by Japan as a follow-up to their presidency in 2019. Similarly, dialogues were started with the Minderoo Foundation on opportunities for collaboration



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under the Sea the Future Program, for example, by testing the trading platform, aimed at providing a new market solution that de-risks trading of recycled plastics for suppliers and buyers, in countries that have the necessary foundations thanks to PROBLUE support. The World Bank is still actively involved in the Global Plastic Action Partnership, in particular the country platforms, where World Bank participation extends to country directors and technical teams, such as in Indonesia, where the Bank is co-chairing the policy task force with the Indonesian government. In Ghana, the Bank will host the National Plastic Action Partnership Secretariat, at the request of the government, and dialogues are ongoing in Nigeria to strengthen the World Bank's role with PROBLUE support.

Partnerships are also critical for supporting and coordinating efforts in countries and regions across all sectors of the blue economy. With Asian countries championing solutions to the marine plastics crisis, the World Bank is engaged in countries and regionally (e.g., ASEAN) in multilateral dialogues with UN institutions, initiatives from the private sector (e.g., Circulate Capital) and coordinate efforts with development aid from donor countries. In Africa, Côte d'Ivoire, Ghana, Nigeria, Rwanda, and South Africa have joined efforts to develop a circular economy alliance. The World Bank is also engaged with the African Development Bank to support approaches that would help African countries leapfrog to circular economies. Finally, seminal work on decarbonization of shipping, initiated in FY21, will continue in FY22 in close collaboration with the IMO.

BOX 7. Responding to COVID-19: Water, Sanitation, and Hygiene (WASH) Interventions in Fish and Aquaculture

COVID-19 can be spread among workers on fishing vessels and at landing sites, fish farms, processing plants, and markets. People working with fish can also contaminate the products if they are infected with COVID-19. WASH infrastructure and practices are essential to ensure worker safety and fish health, provide safe fish and fish products, reduce the spread of COVID-19 and other infectious diseases now and in the future, and in so doing, address the diverse risks facing women and men in fisheries and aquaculture.

In an effort to bring together WASH interventions with fisheries and aquaculture, which are critical sectors for food security and nutrition and for providing jobs for men, women, and youth, PROBLUE is supporting the Water Global Practice to help inform ongoing engagements in fisheries and aquaculture and ongoing WASH interventions that may be broadened to include these sectors. Longer term, the idea behind this Environment, Natural Resources, and Blue Economy and Water GP collaborative effort, also benefitting from expertise from the Food and Agriculture Organization of the United Nations, is to generate demand for future activities connecting those spaces and raise awareness of a broader audience.

This PROBLUE-supported activity is a rapid desk review of the evidence of effectiveness of WASH interventions in fisheries and aquaculture; development of a guidance note on WASH interventions in the fisheries and aquaculture sectors; adaptation of a rapid WASH needs-assessment tool to assess water supply, sanitation, hygiene and hand washing, and waste-water management in the fisheries and aquaculture value chains; and production of a series of infographics and an animated video covering WASH in the fisheries and aquaculture sectors.

In developing these products, a value chain approach is used, from producers (aquaculture hatcheries and farms, fishing vessels) to landing sites, auctions, processing facilities, storage facilities, and markets, while also accounting for the wider coastal-community context. Bank task teams will be provided with key tools and knowledge to support client countries in their efforts to respond to the ongoing health and economic crisis stemming from COVID-19. The needs-assessment tool, in particular, will make the Bank nimbler in responding to similar crises in the future.

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5. RESULTS AND MONITORING

The Partnership Council adopted PROBLUE’s monitoring and evaluation (M&E) plan, which is the basis for reporting on results, in January 2021. It outlines the structure and roadmap of how PROBLUE will monitor and report results achieved and how these are evaluated. Results are expected in fisheries and aquaculture, marine pollution management, shipping and transport, offshore energy, and coastal tourism. The program will also strengthen the enabling environment for the blue economy and contribute to cross-cutting efforts related to gender equality, climate change, and MFD. Assessment of progress through indicators focuses on the five sectors and the cross-cutting challenges and synergies between the sectors. Because the four pillars are highly integrated, results will not be measured separately. The M&E plan can be revised if agreed by the Partnership Council.

PROBLUE follows a simple, robust M&E approach that informs the pipeline, guides development of activities, and is used to document and track uptake and influence of PROBLUE work. From project design to closure, the M&E system helps ensure that PROBLUE’s activities and programs are conceptualized and delivered through the lens of integration and transformative change. All proposals, progress reports, and completion reports include articulation of uptake pathways and

audience engagement in activity design and delivery following a clearly articulated theory of change. PROBLUE’s Project Activity Tracking System captures and aggregates outputs, reach, and influence generated by activities. It also evaluates performance for completed activities to verify that objectives have been met.

In the following tables, progress against indicators and their end-of-program targets will be presented using the traffic light system:

STATUS	
	On track
	Partially on track
	Not on track
	No data

Progress values and targets are cumulative; that is, progress is the sum of the preceding years' progress. The leverage ratio is noncumulative. Leverage ratio is the ratio between the financing amounts of approved and pipeline

WBG operation(s) informed by PROBLUE-supported activities in a given fiscal year, and the total funding provided for the PROBLUE-supported activities in the same year.

OUTPUTS

Delivery of outputs is on track (table 1).

TABLE 1. Summary of Outputs Delivered

Indicator			Baseline FY18	Progress FY19	Progress FY20	Progress FY21	End-of-program targets FY26	Status
Capacity building	1.1	Workshops, trainings, and consultations conducted (number)	0	0	38	147	150	
Tools	1.2	Tools developed (number)	0	0	3	21	50	
Knowledge products	1.3	Knowledge products prepared (number)	0	0	0	80	100	

Capacity building

One hundred forty-seven capacity-building activities have been undertaken since the start of PROBLUE—close to the end-of-program target of 150 initially set. Capacity building is important to PROBLUE, especially in the initial years, to build and conceptualize the blue economy approach in participating countries. In addition to trainings, training workshops, awareness-raising activities, and seminars, capacity building included knowledge events, consultations, national workshops, webinars, and brown bag lunches. Capacity-building activities covered all thematic areas under PROBLUE.

Tools

Progress in development of tools is on track. Twenty-one tools have been developed against an end-of-program target of 50. The tools will help in applying the blue economy approach globally, regionally, and nationally and in building the enabling environment for the blue economy at the country level. Examples of global tools developed are a database for maritime transport costs, a methodology for cost-benefit analysis in aquaculture regarding biosecurity, and a rapid WASH needs assessment. Examples of regional and national tools are a toolkit on metrics on plastic waste in East Asia and the Pacific, a plastics life-cycle assessment framework for cities in India, a database of manufacturers in the circular economy in Sierra Leone, and a survey tool on plastic waste perception and behavior in the Maldives.



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Knowledge products

Eighty knowledge products have been developed since the start of PROBLUE. This is close to the end-of-program target of 100. These include a range of country-level knowledge products, including:

- Building strategies with innovative measures for plastic-free seas and oceans in China
- Assessing pollution and plastic transmission in the Yangtze River
- Qualitative and quantitative analysis of contributing sources; waste generation and leakage mechanisms and potential policy measures and mitigating measures in China
- Vietnam market study on plastics circularity
- National assessment on plastic waste management in India
- Addressing mismanaged plastics in Kerala, India
- Vulnerability assessment reports and mangrove status reports for Ghana and Guinea
- Report on the status of the blue economies of Galapagos, Ecuador, and Peru
- Analysis report on the origin and lifecycle of key priority plastics in Sierra Leone
- Plastic value chain analysis with stakeholder analysis in Myanmar
- National Plastic Action Partnership zero draft for Myanmar

Examples of regional and global knowledge products are the:

- Baseline report on pollution in the Black Sea
- Pacific Country Management Unit marine plastics action plan
- Global shipping traffic density dataset
- Global sustainable and resilient tourism on small islands and in coastal destinations qualitative market research findings
- Factsheet on gender, marginalized people, and MSP
- Global guidance note on evidence-based WASH interventions in fisheries and aquaculture value chains

PROPOSALS

TABLE 2. Summary of Proposals Approved in Fiscal Year (FY) 2021

Proposals			Baseline FY18	Progress FY19	Progress FY20	Progress FY21	End-of-targets FY26	Status
<i>Approved proposals</i>				5	48	31	N/A	N/A
<i>Ongoing proposals</i>				5	48	67	N/A	N/A
<i>Completed proposals</i>				0	0	17	N/A	N/A
Gender	1.4	Approved PROBLUE-supported proposals with gender analysis and gender focused approaches and strategies (number; %)	0	47 (96%)	30 (100%)	28 (90%)	120 (80%)	
Climate change	1.5	Approved PROBLUE-supported proposals with climate change-specific data and analytics (number; %)	0	48 (98%)	30 (80%)	28 (90%)	120 (80%)	
Mobilizing finance for development	1.6	Approved PROBLUE-supported proposals with MFD-specific data and analytics (number; %)	0	38 (78%)	15 (50%)	17 (55%)	75 (50%)	
Fragility, conflict, and violence	1.7	Approved PROBLUE-supported proposals relevant to FCV context (number; %)	0	16 (33%)	8 (33%)	7 (23%)	50 (33%)	

Note: Percentages do not add to 100 percent because one activity can inform multiple cross-cutting themes.

Delivery of proposals is largely on track (table 2). The number of processed and approved PROBLUE-supported activities has remained at a substantial level although it decreased from FY20 to FY21. FY20 was an active year, whereas FY21 reflects that fewer activities will be approved in coming years but probably

be larger in financing amounts. As regards mobilizing finance for development, climate change, and gender, approved proposals incorporate these as stipulated but a lower number than stipulated incorporate fragility, conflict and violence.

LEVERAGE

Beneficiaries and leverage ratio

TABLE 3. Leveraging of World Bank operations – beneficiaries and leverage ratio

Indicator		Baseline FY18	Progress FY19	Progress FY20	Progress FY21	End-of-program targets FY26	Status
Beneficiaries	2.1 Beneficiaries (number), of which female (%)	0	0	6,434,811 (50%)	27,430,027 ^a (50%)	20,000,000 (50%)	
Leverage - financing	2.2 WBG operations informed (number)	0	0	50	26	105	
	2.3 WBG resources leveraged (\$ billion)	0	0	3.6	3.8	9.0	
	2.4 Leverage ratio: WBG operations informed (\$) / PROBLUE funding (number)			164	314	80	

^a The large increase compared to the previous year is due to some large solid waste management projects that have a large number of beneficiaries.

Note: The leverage financing data is not limited to the leverage from approved proposals within a specific fiscal year (FY). The data are aggregated to reflect leverage from approved proposals within a specific FY and new leverage from approved proposals in the prior FY during the reporting period.

Leveraging of WBG operations and beneficiaries is on track (table 3). Leveraging refers to the added value of PROBLUE to WBG operations (that outputs from PROBLUE-supported activities inform the design of WBG operations) and is measured as the number and financing amount of active or pipeline² projects the design and implementation of which PROBLUE activities influenced. The number of beneficiaries in these projects is measured too. As of June 30, 2021, PROBLUE had leveraged 76 active and pipeline lending operations of more than \$7.4 billion. In FY21, \$12 million of the total approved PROBLUE proposals, including proposals approved in FY21, and proposals approved in the prior years which leveraged additional operations in FY21, directly supported the design and implementation of 26 active and pipeline lending operations of \$3.8

billion (table 1). This includes support across all PROBLUE pillars and five regions (figure 2):

- East Asia and Pacific: supporting eight lending operations of \$1.4 billion in China, Indonesia, Lao People's Democratic Republic, and Vietnam.
- South Asia: supporting four lending operations of more than \$1 billion in Bangladesh and Nepal.
- Africa: supporting seven lending operations of \$737 million in Cabo Verde, Ghana, Mozambique, Senegal, and Sierra Leone.
- Middle East and North Africa: supporting two lending operations of \$350 million in Egypt and Morocco.

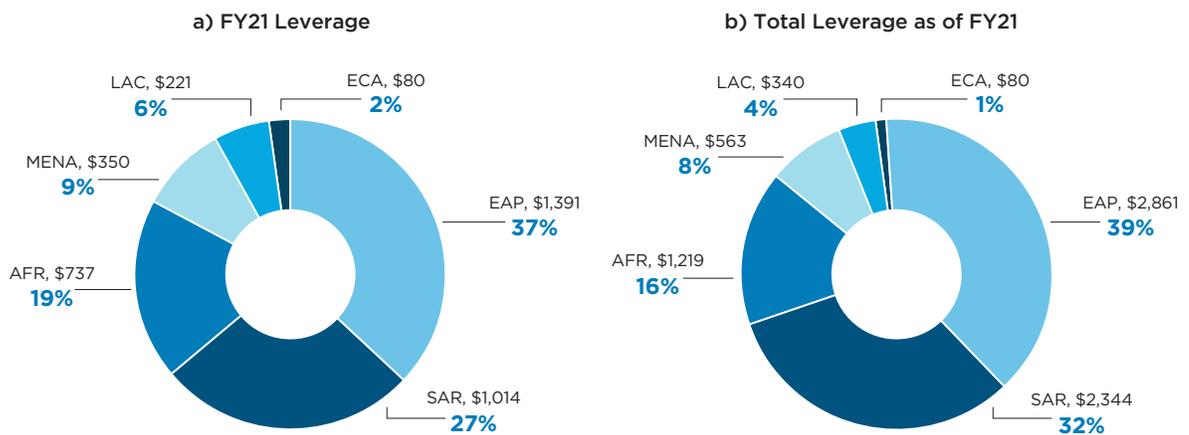
² Financing amounts for pipeline investments may change upon approval.

- Latin America and the Caribbean: supporting four lending operations of \$221 million in Costa Rica, Jamaica, and the Gulf of Fonseca.

In FY21, East Asia and the Pacific and South Asia included two-thirds of the FY21 leverage portfolio (Figure 2a), where PROBLUE-funded

analytical and technical work is informing and adding value to increasing number of operations. In Africa, the Middle East and North Africa, and Latin America and the Caribbean, the leverage portfolio has almost doubled from FY20, with PROBLUE-funded activities laying the groundwork in building pipeline operations.

FIGURE 2. PROBLUE Leverage According to Region



Note: Financing amounts for pipeline investments may change upon approval.

Leverage of Design

Table 4 summarizes the leveraging of the design of WBG operations and thus shows what has been informed through knowledge, analytics, and technical assistance. Progress is largely on track for most indicators. For offshore energy and desalination, progress is partially on track. This mirrors the WBG portfolio and the small number of projects in these sectors. For the indicator on reduction in

use of fertilizers and pesticides in agriculture, the collaboration with the Agriculture GP must be strengthened to link up to agricultural projects that will operate near coastal areas. Of concern is that some of the gender indicators are only partially on track. This requires further attention in the design of projects though PROBLUE support and adequate reporting of the influence on the design.

TABLE 4. Leveraging of World Bank Operations—Design

Indicator			Baseline FY18	Progress FY19	Progress FY20	Progress FY21	End-of-program targets FY26	Status
Greenhouse gas emissions	2.5	WBG operations that will reduce net GHG emissions (number)	0	0	6	10	50	
Ghost gear	2.6	WBG operations that will reduce ghost gear (number)	0	0	0	2	20	
Economic opportunities -gender	2.7	WBG operations that will increase men's and women's equal economic opportunities in traditional and/or new economic sectors (number)	0	0	11	11	40	
Awareness-gender	2.8	WBG operations that will increase men's and women's equal awareness of gender issues, economic opportunities and related risks (number)	0	0	0	8	40	
Participation-gender	2.9	WBG operations that will increase men's and women's equal participation in planning and decision-making on the blue economy (number)	0	0	3	5	80	
Gender based violence	2.10	WBG operations which will increase the number of gender-based violence prevention and response practices in relation to the blue economy (number)	0	0	6	0	80	
Seascape planning-gender	2.11	WBG operations that will increase the number of women's rights organizations consulted and involved in seascape planning (number)	0	0	1	2	40	
Coastal resilience	2.12	WBG operations that will decrease the number of households in coastal areas vulnerable to erosion and flooding (number)	0	0	0	3	20	

Indicator		Baseline FY18	Progress FY19	Progress FY20	Progress FY21	End-of-program targets FY26	Status
Fisheries management	2.13 WBG operations that will increase the number of fisheries under sustainable management (number)	0	0	9	8	25	
Fisheries value addition	2.14 WBG operations that will increase the value from improved handling from fisheries under improved management (number)	0	0	9	4	25	
Aquaculture production	2.15 WBG operations that will increase the sustainable production in aquaculture (number)	0	0	4	4	12	
Fisheries transparency	2.16 WBG operations that will increase the number of countries with public disclosure of all important fisheries-related information (number)	0	0	0	1	10	
Leakage of plastics	2.17 WBG operations that will reduce leakage of plastics to the environment (number)	0	0	5	8	30	
Circular Economy	2.18 WBG operations that will increase the number of plastic product value chains with application of Circular Economy approaches (number)	0	0	1	5	25	
Solid waste management	2.19 WBG operations that will increase the number of households connected to solid waste management services (number)	0	0	1	4	15	
Pesticide and fertilizer reduction	2.20 WBG operations that will increase the agricultural area under improved practices to reduce leakage of pesticides and/or fertilizers (number)	0	0	1	1	15	
Marine pollution hotspots	2.21 WBG operations that will increase the number of coastal and marine pollution hotspots managed for reduced environmental impacts (number)	0	0	2	5	10	

Indicator		Baseline FY18	Progress FY19	Progress FY20	Progress FY21	End-of-program targets FY26	Status
Offshore energy	2.22 WBG operations that will increase the electricity generation from environmentally sound offshore sources (number)	0	0	0	0	15	
Desalination	2.23 WBG operations that will improve desalination practices to become environmentally friendly (number)	0	0	0	0	5	
Coastal tourism hotspots	2.24 WBG operations that will increase the number of coastal tourism hotspots under improved environmental destination management (number)	0	0	2	5	15	

PROBLUE support of \$300,000 has leveraged the Sustainable Inclusive and Resilient Tourism Project (P171556) in the Philippines through technical assistance on solid waste management and waste minimization. The technical assistance has markedly increased knowledge of the plastic types that leak into the environment on the islands under the project and offers recommendations for waste prevention using alternatives.

A good example of how a WBG project can be leveraged in several ways is the first phase of the Oceans for Prosperity Program in Indonesia (P173391), with a PROBLUE-supported activity of \$725,000. Fisheries systems conservation and management measures were assessed, and proposals for managed access and monitoring, control, and surveillance of fishing activities and along the value chain were delivered. Ways in which climate change affects fish populations and fisheries were discussed in high-level fora, and adaptation and policy measures were proposed. Livelihoods were analyzed in the context of mangrove restoration, and existing

access to finance and skills enhancement programs of relevance to the Oceans for Prosperity Program were discussed. Finally, blue finance and policy advice to public agencies and coordination of intersectoral and interagency efforts to promote and move the blue finance agenda forward were initiated. Results are contributing to the design of the Oceans for Prosperity Program and government and Bank understanding of key topics.

Coastal modeling studies supported by PROBLUE (\$6 million) under the Saint-Louis Emergency and Resilience Project (P166538/P170954) in Senegal have allowed for detailed characterization of the hydrodynamic and morphological dynamics of the delta area and the Saint-Louis coastal waterfront. It has provided for identification, selection, and definition of sustainable long-term coastal protection solutions and nature-based solutions strategies. The no-regret solutions developed have also attracted attention from various donors (namely the French Development Agency and Dutch Development Cooperation)

who have expressed interest in funding implementation of identified solutions.

Leverage of policy reforms, MFD, and regional cooperation

Table 5 captures leveraging of policy reforms, MFD, and regional cooperation. Policy changes include revisions to existing policies and formulation of new blue economy-relevant

policies, as well as various documents linked to these, for example, strategies, budget guidelines, action plans, legal documents. Progress is largely on track but starting to fall behind in certain areas: offshore energy, desalination, tourism. This is probably a question of timing and that these reforms will need some time to materialize. MFD and regional cooperation show some progress, although still at a low level.

TABLE 5. Leveraging Design of National Policy Reforms, Mobilizing Finance for Development and Regional Cooperation

Indicator	Baseline FY18	Progress FY19	Progress FY20	Progress FY21	End-of-program targets FY26	Status	
Policy reforms	2.25 National policy reforms in fisheries & aquaculture informed (number)	0	0	0	3	20	
	2.26 National policy reforms in marine pollution management informed (number)	0	0	0	6	25	
	2.27 National policy reform in offshore energy with due environmental and social considerations informed (number)	0	0	0	0	10	
	2.28 National policy reform in shipping & transport (including desalination) informed (number)	0	0	0	0	5	
	2.29 National policy reform in coastal tourism informed (number)	0	0	0	0	20	
Mobilizing finance for development	2.30 Investment cases in PROBLUE relevant sectors presented to potential investors (number)	0	0	0	1	10	
Regional Cooperation	2.31 Countries with strengthened engagement in the blue economy at regional level (number)	0	0	0	1	25	

Examples of leveraging of policy reforms include the new plastic law in Senegal, the Vietnam Fisheries Development Strategy, Vietnam National Action Plan on Marine Debris, Organisation of Eastern Caribbean States Regional Fisheries Action Plan, Maldives National Waste Management Strategy, and Myanmar National Plastic Action Partnership.

Emerging regional cooperation is manifested in pollution prevention in the Black Sea. PROBLUE has supported national capacity building, stakeholder involvement, and coordination and regional dialogue and cooperation by encouraging substantive stakeholder engagement at the six consultation events in the Black Sea countries, where the objectives and scope of the advisory services and analytics received strong stakeholder endorsement.

CROSS-CUTTING THEMES

Climate Change

Of grants currently under implementation, 70 percent reported progress toward climate change mitigation and adaptation across a range of focal areas. Of these, more than 44 percent contributed through initiatives focused on plastics reduction and improved waste management; 21 percent contributed to adaptation focused on fisheries, aquaculture and livelihoods; 14 percent contributed to increased coastal resilience, tourism, and nature-based solutions; 7 percent contributed to maritime transport, ports, and fisheries landings; and 2 percent contributed to energy (offshore wind). Other areas included tools, baseline data, capacity building, policy, MSP, and marine protected areas. Some grants contributed to multiple areas.

East Asia and the Pacific has the most grants addressing climate change (27 percent), followed by global (24 percent), Latin America and the Caribbean (15 percent), Africa (16

percent), South Asia (9 percent), the Middle East and North Africa (7 percent), and Europe and Central Asia (2 percent). Europe and Central Asia had one grant focused on climate change (reducing pollution in the Black Sea).

In addition to the examples outlined in chapter 2, PROBLUE is responding to climate change in a global report on how to improve the use of nature-based solutions for ecosystem restoration, with a focus on climate co-benefits, including mitigation and adaptation. This report was used in the preparation of the WBG Climate Change Action Plan (2021-2025) that was finalized in June 2021. Another PROBLUE-supported initiative in Latin America and the Caribbean has increased the resilience of fisherfolk to disasters such as tropical cyclones and bad weather by launching a parametric insurance scheme (Caribbean Oceans and Aquaculture Sustainability Facility). A tool was also developed with the FAO to assess the impacts of climate change on fish stocks and improve fisheries sector governance to increase resilience to changes. Finally, in Africa, a sustainable ports partnership (West Africa Coastal Areas Management Project) is helping increase the energy efficiency of ports and coastal resilience.

Gender

Integration of gender analysis to achieve gender-responsive and -transformative policies, initiatives, and programs has been a cornerstone in selection and implementation of PROBLUE-supported activities. PROBLUE seeks to increase equity between women and men through support to—among other things—training and capacity building, gender data collection and analysis, equal participation of women and men in stakeholder consultations, awareness raising, and creating economic opportunities. The focus has been on identification of opportunities to narrow gender gaps (between men and women (and girls and boys) or between groups of women



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or men (e.g., between poor and nonpoor women). Examples include an analysis of gender-related impacts of plastic pollution and opportunities from plastic recycling, a regional study of guidelines for promoting gender equality in regional marine plastic management was conducted in six ASEAN countries. To better understand the nature-based livelihood of women in coastal areas of West Africa, a study of how women benefit from mangroves and what role they play in conservation of mangroves is in process. In Cambodia, socioeconomic surveys are being administered in preparation for a preliminary environmental and social impact assessment for Siem Reap and informing specific actions to increase gender equality. Gender has received particular attention in the design of the study of ecosystem resilience and sustainable tourism in Fiji and has been included in the fisheries analytics, especially the study of coastal fisheries. The gender perspective in ecosystem-based adaptation in Haiti to ensure adequate sensitivity in solutions. Gender equality was taken into account when preparing the draft

of the National Plastic Action Partnership in Myanmar. More attention must be paid to integrating concerns over the equality and equal opportunities between men and women and adequate mechanisms into the WBG portfolio.

Mobilizing Finance for Development

MFD is the WBG's approach to systematically leveraging all sources of finance, expertise, and solutions to support developing countries' sustainable growth. There are some examples of successful support to MFD, but it is probably too early to fully quantify MFD's contribution. In East Asia and the Pacific and as a result of market studies, dialogue between IFC and the private sector on plastic recycling and alternatives has helped unlock the potential for private sector investments. IFC arranged a landmark \$300 million financing package to help a company increase its plastic recycling capacity in Brazil, India, Indonesia, the Philippines, and Thailand. This first-ever blue loan to a global plastic resin manufacturer will lead to the recycling of 50 billion polyethylene terephthalate bottles globally per year by

2025. Other similar investments are being explored in China, Indonesia, the Philippines, and Vietnam. A tourism project in Sierra Leone will enable design and implementation of a World Bank operation (P164212) by improving the quality of target destination areas, reducing risks for private investors, and creating new entrepreneurial activities linked to circular economy manufacturing. In aquaculture, an investment needs assessment has provided policy and investment recommendations, which will help create an enabling environment for MFD in the public and private sector, including large improvements in national infrastructure.

Fragility, Conflict, and Violence

PROBLUE seeks to explore opportunities to incorporate specific challenges emerging in contexts of FCV. Because fragile countries often struggle with governance, policy, and regulation of environmental matters, PROBLUE works to integrate strategies to address these weaknesses and improve understanding of critical barriers that prevent development of sustainable, healthy marine and coastal resources. As of FY21, PROBLUE had 14 projects in countries facing FCV. Several of these projects are highlighted below.

Pacific Island Countries

The multi-pillar project East Asia and the Pacific—Pacific Ocean Advisory Program has been established in six of the 12 Pacific Island countries on the World Bank list of countries facing FCV: Federated States of Micronesia, Kiribati, Papua New Guinea, Republic of Marshall Islands, Solomon Islands, and Tuvalu. The project's development objective is to better understand regional maritime connectivity in the Pacific and identify infrastructure gaps to guide second-generation maritime operations. Project activities are designed to improve logistics and reduce transport costs in support of fisheries, import-export supply chains, and tourism industries; improve maritime safety;

enhance resilience to climate, pandemic crises, and emergencies; and decarbonize the maritime sector. Strategies to address FCV and mitigate risks will be incorporated into all these activities, with a focus on capacity building.

Lebanon

Lebanon is a country facing FCV that has experienced social unrest exacerbated by environmental problems. Poor air quality and solid waste management have affected not only the quality of life and health of Lebanon's population, but also the attractiveness and competitiveness of its tourism sector. Under pillar 2, the Enabling a National Action Plan for the Prevention and Reduction of Marine Litter Project aims to analyze the sources and pathways of marine litter and link the analysis to the broader scope of solid waste management in Lebanon. The project will facilitate development of a marine litter action plan to provide a path for mitigating and preventing marine litter with implications for climate change, poverty, and livelihoods.

Africa

Under pillar 3, the West and Central Africa Sustainable Ports Partnership Project aims to establish and operationalize a partnership of port authorities and operators to reduce environmental and social damage from port infrastructure and operations in targeted communities and areas in coastal West and Central Africa. Three of the 19 member countries of the Ports Management Association of West and Central Africa categorized with medium-intensity conflict and four with high institutional and social fragility. The partnership will reinforce international (fostering dialogue, knowledge exchange, capacity building) and national (through active stakeholder identification and engagement and inclusion of vulnerable groups) understanding.

Mozambique faces FCV. The goal of the multi-pillar MozAzul is to strengthen the knowledge base on sustainable blue economy development in Mozambique. The project has influenced the design of fisheries and blue economy components of two operations approved in June 2021 – the Sustainable Rural Economy Program (P174002; \$150 million) and the Northern Mozambique Rural Resilience Project (P174635; \$150 million). It has also increased the capacity of Mozambique’s BEDF, including through development of its action plan.

Private Sector

Private sector engagement is crucial to expand climate action with the necessary depth across the economy. Opportunities for private sector engagement include plastic and waste management, major infrastructure, and private sector diversification into new and established industries, including fisheries, aquaculture, and tourism.

The private sector is key to expanding investments in nature-based solutions, but a number of challenges remain, as highlighted in a global PROBLUE-funded internal analysis:

- Although the benefits of restoration can far exceed the costs, lack of a compensation mechanism for ecosystem services is an obstacle to investment. Restoration involves tradeoffs that must be carefully assessed, and prioritization of restoration projects requires high-resolution, context-specific data.
- There is aversion to risk and resistance to change to unfamiliar nature-based solutions.

Key opportunities to address these market failures include adopting natural capital accounting and ecosystem accounting and creating markets for and valuing ecosystem services. Other opportunities include:

- Further decision-support tools that could be of value include economic valuation frameworks and assessment of economic and environmental trade-offs in restoration.
- Private finance could be mobilized through green financing approaches and a favorable policy environment.

Lao People’s Democratic Republic’s National Green Growth Strategy (NGGS) sets a target to reduce waste generation from 237 kg per person per year in 2015 to 210 kg in 2025 and 180 kg in 2030. It also aims to increase the amount of waste that is reused or disposed of through proper methods from 50 percent in 2015 to 65 percent in 2025 and 80 percent in 2030. The assessment of waste management priorities, investment opportunities and requirements, and Support development of GOL’s National Plastics Management Roadmap and Action Plan (NPAP) completed in May 2021 provided insights into plastic waste opportunities for the circular economy, green jobs, and private sector development. Transitioning to a circular economy will bring together the public and private sectors, which will provide an environment in which the private sector can invest and innovate.

A fisheries infrastructure assessment tool was developed with special attention paid to private user perspectives so that the choice, design, and management of fisheries-related infrastructure would be well aligned with private sector incentives, ensuring financial viability of infrastructure investments.

The global decarbonizing maritime transport activity has leveraged private sector engagement to maximize the impact of research and findings. Most importantly, the activity has strengthened its partnership and collaboration with the Getting to Zero Coalition, a progressive organization of



Caribbean Sea / © Shutterstock / Damsea

shipping stakeholders dedicated to reducing and eliminating shipping's GHG emissions. The activity enlisted the support of the private sector to review technical reports, webinars and presentations were held with the private sector to further disseminate the activity's outcomes, and an internal scoping paper was written that outlines business opportunities for the private sector within shipping's low-carbon energy transition and in close collaboration with IFC on energy efficiency in shipping.

A PROBLUE-supported advisory services and analytics project in Kiribati, "Supporting Diversification and Growth of Kiritimati's Blue Economy," is supporting diversification of, and investment planning for, the blue economy through sectoral and cost-benefit analysis. This includes solar salt production and pet fish studies that focus on the role and potential for private sector engagement and investment in both subsectors as a fundamental part of the government's strategy to catalyze further investment in these areas of the blue economy.

The Caribbean Regional Blue Port Connectivity Prefeasibility Study (Phase 2) has identified areas for potential private sector engagement and highlighted areas where private partners, such as cruise terminal operators, could improve, such as energy consumption and efficiency.

Capacity Building

Capacity building is at the heart of all PROBLUE projects. Through stakeholder and private sector engagement, awareness raising, community sensitization, and other capacity-building activities, PROBLUE projects have strengthened country and regional advocacy and coordination to integrate actions that catalyze the potential of the blue economy. Several PROBLUE projects have engaged in development of national action plans and strategies to inform on investment and policy projects related to supporting healthy, productive oceans, such as developing the National Plastics Management Roadmap and Action Plan in Lao People's Democratic

Republic and developing a strategy and action plan to reduce land-based and marine pollution in Bangladesh. Several capacity-building examples are provided below.

Global: Decarbonizing Maritime Transport

Under pillar 3, the goal of this activity is to facilitate decarbonization of maritime transport primarily by seeking to close knowledge gaps to enable and accelerate effective climate policy making and to mobilize shipping stakeholders developing joint solutions with a wide range of sector ownership. The activity made a significant contribution to capacity building in developing countries. A series of workshops about the challenges and opportunities of zero-carbon shipping in developing countries was delivered to SIDS and least-developed countries in May and June 2020 in collaboration with the Embassy of Mexico to the United Kingdom. This enabled the IMO member states to make informed policy decisions and to better understand impact assessments of GHG reduction policies. This project also increased awareness of SIDS and least-developed countries of the challenges and opportunities of low- or zero-emission shipping and strengthened their coordination to speak with a stronger voice at the IMO.

Europe and Central Asia: Pollution Prevention in the Black Sea

Under pillar 2, this project involves preparation of national and regional diagnostic reports on pollution and common resource management in the Black Sea. Activities will involve engaging government counterparts and building ownership to support the activity, interacting with and seeking input from various nongovernment stakeholders on relevant topics, partnering with development partners to collaborate on common areas of interest, and strengthening the regional dialogue on efficient data collection. In support of institutional

strengthening and outreach, a stakeholder engagement strategy was developed among the first outputs of the advisory services and analytics. Eighty to 100 participants attended the country consultations in the first months of the advisory services and analytics, demonstrating a high level of endorsement and buy-in on the side of the countries on the objectives and scope of the Blueing the Black Sea advisory services and analytics (Turning the Tide of Pollution). Work on this study also builds on the excellent relationships established within the common maritime agenda context and on implementation of a national portfolio in each country and with the Black Sea Commission and Black Sea Economic Cooperation.

ASEAN

Under PROBLUE pillar 2, the goal of the Regional Support on Marine Plastics Litter for ASEAN Project is to strengthen regional advocacy to support an ASEAN framework for coordinated actions; deepen knowledge on marine plastic debris sources, transport, and impacts; and support development of national action plans to inform plastics-related policies and investment solutions in select ASEAN countries (Malaysia, Philippines, Thailand). With these objectives, the project developed a toolkit to assess plastic pollution methodologies and identify plastics solutions for small and remote islands and associated training with small island stakeholders (including local government and nongovernmental organizations), methodologies on material flow analysis of plastics with associated training workshops in Thailand, an extended producer responsibility webinar series as part of Malaysia's hosting of the 2020 Asia-Pacific Economic Cooperation meetings, a regional workshop on plastics metrics methodologies co-organized with UNEP, and regional stakeholder meetings as part of ASEAN Regional Action Plan preparation. All



products were prepared in close collaboration with counterparts and ultimate users and beneficiaries, including consultation workshops with a wide range of stakeholders from the private sector, nongovernmental organizations, governments, and development partners.

The ASEAN Regional Action Plan on Combating Marine Debris includes actions on capacity building such as strengthening the ASEAN regional knowledge network on marine plastics and regional training programs on plastics and waste.





6. COMMUNICATIONS AND KNOWLEDGE MANAGEMENT

Harnessing the infrastructure built in FY20, FY21 marked an inflection point for PROBLUE communications and knowledge management as the focus shifted to supporting dozens of PROBLUE-supported activities that had come to fruition. In addition to regular delivery of the communications program, PROBLUE delivered a World Oceans Day campaign, 12 videos, nine reports, a new webpage, and more.

WEBPAGES

In FY21, PROBLUE expanded its external webpage to highlight examples of ocean development work around the world. Engaging key audiences PROBLUE’s digital web traffic grew by 47 percent over FY20. Unique visitors were also up 49 percent, demonstrating that PROBLUE is reaching new audiences.

As the fiscal year ended, PROBLUE supported development of the World Bank marine plastic pollution webpage to provide audiences with a full view of the WBG’s approach. Messaging that PROBLUE developed earlier was used to create the page, which links to the PROBLUE webpage and several PROBLUE assets.

PUBLICATIONS AND MEDIA

In addition to launching its second annual report, PROBLUE supported nine publications. As a result, there were more than 10 media hits with mentions of PROBLUE by name or the work that PROBLUE had supported. The *Wall*

Street Journal highlighted the decarbonization of shipping reports, and *Reuters* covered the *Banking on Protected Areas* report. PROBLUE was also directly mentioned in a *Straits Times* opinion piece from WBG President David Malpass on marine plastic pollution.



ASSETS

Infographics such as the *Blue Economy Development Framework*, and *Marine Plastics: A Circularity Approach*, were updated and translated into several languages. PROBLUE funded a new Pakistan blue carbon infographic to support the publication. Regular quarterly update notes were sent to the PROBLUE Partnership Council and other interested parties.

EVENTS

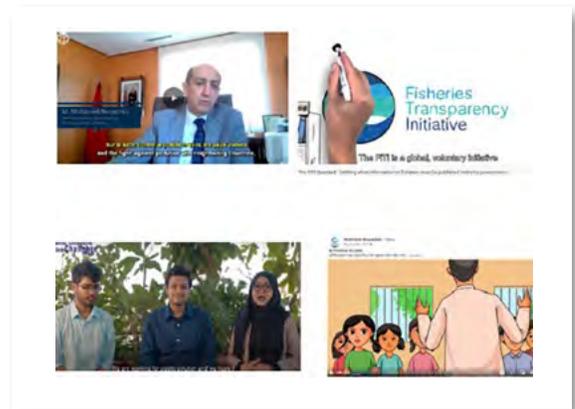
PROBLUE was mentioned in more than 15 virtual and in-person events in FY21. With more than 500 people tuning in live from around the world for the World Bank co-hosted *Marine Plastics in East Asia and the Pacific: Crisis and Opportunity* event, H.E. Vegard Kaale, Norwegian Ambassador to Indonesia and Timor-Leste spoke about PROBLUE as a co-chair representative, providing important linkages to in-country work.

Country-specific highlights include the *Bangladesh Innovation Challenge*, the *Pakistan Blue Carbon Rapid Assessment*, *Coastlines Without Plastics* co-hosted with the government of Morocco, and *Oceans for Prosperity Indonesia*, where World Bank Managing Director Mari Pangestu mentioned PROBLUE. World Bank leadership also mentioned PROBLUE at various forums, including at the *UN General Assembly*, *Ocean Forum 2*, the *FiTI Report Launch Forum*, and *PREVENT Waste Alliance*.

VIDEOS

Many of these events were supported by digital media, with PROBLUE supporting production of 12 videos this year, including two FiTI videos, two Banking on Protected Areas videos, one North Africa regional plastics video, four videos of the

winning teams from the Bangladesh Challenge, two promotional videos for the Bangladesh Challenge, and one educational film for children in Bangladesh on marine pollution.



SOCIAL MEDIA

As the digital space grew increasingly important in light of the COVID-19 pandemic, so did PROBLUE's social media presence. PROBLUE engaged in the digital conversation on oceans throughout the year, including around events, launches, and notable UN days. On Twitter alone, #PROBLUE_Oceans was used 58 times in FY21. As a result, social media drove



7 percent of traffic to the PROBLUE webpage, compared with 4 percent the previous year.

On June 8, World Oceans Day, PROBLUE ran a campaign for the WBG's combined 8.6 million followers across Instagram, Facebook, LinkedIn, and Twitter. The 4-day campaign highlighted the WBG's blue economy work, including work supported by PROBLUE. Engagement rose 66 percent over FY20. Coming in just behind the World Wildlife Fund account, the World Bank ranked second overall for Oceans Day on Facebook.

KNOWLEDGE MANAGEMENT

PROBLUE continued its engagement with World Bank staff, with five internal newsletters this year reaching approximately 1,000 internal staff. Additionally, PROBLUE's learning campaign continued, with 10 PROBLUE-supported webinars for staff to mainstream the blue economy agenda throughout the institution. Furthermore, internal messaging documents were developed to inform communications products developed by staff, critical for ensuring that all PROBLUE

communications products are on message—from videos to opinion pieces. Internal guidelines were also updated to reflect the latest privacy policies.

PROBLUE's Intranet page was established last year to serve as a one-stop shop for Bank staff to learn more about the fund, apply for support, access all relevant documents and knowledge products, follow PROBLUE's latest developments, and learn about upcoming events. This page is a demonstrated resource for staff, with unique users increasing by 57 percent this year. At nearly 12,000 site visits in total— an average of 13 visits per person—users are coming back to the page often to use it as a resource.



7. FINANCIAL OVERVIEW AND ADMINISTRATION

PROBLUE FINANCIAL OVERVIEW

At the end of FY21 (June 30, 2021), PROBLUE had signed contributions of more than \$138.5 million from nine donor countries under two trustee accounts—a PROBLUE multi-donor trust fund (MDTF) (TF073194) and a PROBLUE single-donor trust fund (SDTF) (TF073437). Actual funds received from donors totaled more than \$106.6 million. Total contributions to the PROBLUE Umbrella program include an additional \$12.7 million from the PROFISH Trust

Funds, for total contributions of more than \$150 million (see Table. 7).

As of the end of FY21, more than \$20 million had been disbursed. Table 6 provides a financial summary of PROBLUE. As of June 30, 2021, PROBLUE's total fund balance, taking into account funds received from donors, disbursements, commitments, and investment income, was approximately \$80 million.

TABLE 6. PROBLUE Financial Summary (as of June 30, 2021)

Note: All figures are in US dollars.

	PROBLUE multi-donor trust fund (TF073194)	PROBLUE single-donor trust fund (TF073437)	TOTAL PROBLUE TRUST FUNDS
A. Total donor-signed contribution amount	122,339,771	16,200,076	138,539,847
B. Actual funds received from donors	90,483,283	16,200,076	106,683,359
C. Total Other adjustments	1,407,732	68,009	1,475,742
Investment income (+)	1,407,732	68,009	1,475,742
Other adjustments (+)	-	-	-
D. Total funds available (B + C)	91,891,016	16,268,085	108,159,101
E. Disbursements	20,061,951	18,024	20,079,975
F. Commitments	8,041,100	28,900	8,070,000
G. Fund balance at trustee, subfund, and disbursing account level (D - E - F)	63,787,965	16,221,161	80,009,126

PROFISH FINANCIAL OVERVIEW

As of the end of FY21, PROBLUE had signed contributions of more than \$12.7 million from six donors under three trustee accounts: PROFISH 1 (TF070942), PROFISH 2 (TF072918), and PROFISH 3 (TF072959). Funds received from donors totaled more than \$12.3 million. As of the end of FY21, approximately \$11 million had been disbursed.

Table 7 provides a financial summary of PROFISH. As of June 30, 2021, PROFISH's total fund balance, taking into account funds received from donors, disbursements, commitments, and investment income, was about \$1.4 million.

TABLE 7. PROFISH Financial Summary (as of June 30, 2021)

Note: All figures are in US dollars.

	1. Multi-donor trust fund for the Global Program on Fisheries (PROFISH) (TF070942)	2. Multi-donor trust fund for the Global Program on Fisheries (PROFISH) —Parallel trust fund of TF070942 (TF072918)	3. Global Program for Fisheries Multi-Donor Trust Fund (PROFISH3) (TF072959)	TOTAL PROFISH TRUST FUNDS
A. Total donor-signed contribution amount	10,119,522	400,000	2,278,820	12,798,342
B. Funds received from donors	10,119,522	400,000	1,804,960	12,324,482
C. Administrative Fees	505,976	-	-	505,976
D. Investment income	542,285	14,967	38,802	596,054
E. Total funds available (B - C + D)	10,155,831	414,967	1,843,762	12,414,560
F. Disbursements	9,676,487	365,634	910,145	10,952,266
G. Commitments	-	-	8,044	8,044
H. Fund balance at trustee, subfund, and disbursing account level (E - F - G)	479,343	49,333	925,574	1,454,250



ANNEXES

LIST OF PROBLUE-SUPPORTED ACTIVITIES

ASA Advisory Services & Analytics
 CP Country Engagement Products
 IPF Investment Project Financing
 KP Knowledge Product

Project Name	Grant #	P No.	Status	Activity Type	Mapping	Country/Region	Approval Date	Sum of Grant Amount	Pillar	Objective
Regional Support on Marine Plastics Litter for ASEAN	TF0B1003	P170994	Active	ASA	EAP	South East Asia	7/9/2019	\$800,000.00	2	To deepen regional advocacy work to support the ASEAN to create the framework for coordinated actions and leverage country-level commitments to reduce marine debris across the ASEAN region.
Fisheries Sector Assessment Toolkit	TF0B0470	P170735	Active	KP	Global	World	5/10/2019	\$400,000.00	1	To develop a toolkit to assess the status of the fisheries sector to help enhance the quality and consistency of project preparation and implementation.
Blue Natural Capital for Changing Wealth of Nations 2020	TF0B0219	P169304	Active	ASA	Global	World	4/18/2019	\$450,000.00	4	To provide countries with information to improve management of blue natural capital as part of the Blue Economy approach by (i) estimating the value of blue natural capital as part of national wealth accounts for 150 countries reported in Changing Wealth of Nations 2020, and (ii) estimating the gains in national wealth from policy and management reform for blue natural capital, and Nature-Based Solutions.
Caribbean Regional Blue Port Connectivity Feasibility Study	TF0B1601	P170860	Active	IPF	LAC	St. Lucia	9/30/2019	\$380,000.00	3	To conduct analysis necessary to prepare a future regional investment operation, the Caribbean Regional Blue Port Connectivity Project, which would enhance port efficiency and resilience while reducing pollution, increasing energy efficiency and connectivity, and elevating compliance with MARPOL in selected Caribbean States.
Developing Recommendations for a Blue Finance Facility	TF0B0492	P171052	Closed	KP	Global	World	5/21/2019	\$60,000.00	4	To produce a brief white paper analyzing the potential for the World Bank to establish a debt swap facility in partnership with The Nature Conservancy that will assist client governments in securing natural capital for a blue economy.

Project Name	Grant #	P No.	Status	Activity Type	Mapping	Country/Region	Approval Date	Sum of Grant Amount	Pillar	Objective
Pathways out of Plastic Pollution	TF0B0512	P170869	Active	ASA	Global	World	6/18/2019	\$650,000.00	2	To develop a set of tools to better understand and design effective, efficient and implementable packages of policy instruments to manage plastic pollution and prevent plastic waste from damaging the marine and terrestrial ecosystem.
Support development of Lao PDR's National Plastics Management Roadmap and Action Plan	TF0B0952	P171011	Active	ASA	EAP	Lao People's Democratic Republic	8/8/2019	\$400,000.00	2	To generate, convene and disseminate knowledge that informs the development and implementation of policies and investments for enhanced plastic waste management in Lao PDR, and help the country build natural and human capital for better management of pollution and waste.
Assessing the Economic Impact of Marine Protected Areas on Regional Economies	TF0B1041	P171044	Active	ASA	Global	World	8/22/2019	\$450,000.00	3	To assess the economic impact of marine protected areas on local and regional economies through nature-based tourism anchored around these areas, and help make the economic case for the need for public investment MPA management to improve biodiversity outcomes and support economic development.
Developing BEDF Analytic Work in Support of BEDF Analytical Tools, TA to Pilots, and support to integrated seascapes guidance panel	TF0B0633	P167405	Closed	KP	Global	World	6/17/2019	\$500,000.00	4	To provide technical assistance to enable high-quality technical and analytical work that will underpin the BEDF toolkit, which strengthens the capacity of countries to analyze, design, and implement the Blue Economy.
Circular Economy and Marine Plastic	TF0B0895	P168024	Active	ASA	SAR	Bangladesh	7/11/2019	\$450,000.00	2	To support the Government to better understand the status of marine debris, especially plastics, and develop a roadmap/action plan to reduce marine plastics.
Decarbonizing Maritime Transport	TF0B1350	P168079	Active	ASA	Global	World	9/3/2019	\$250,000.00	3	To ensure the sector contributes its fair share to reaching the Paris Agreement's goal of limiting global warming to well below 2.0°C by moving towards low-/zero-carbon shipping (including ships and ports).
Support sustainable solid waste management in selected Philippine tourism islands to reduce ocean plastic pollution	TF0B0896	P171556	Active	IPF	EAP	Philippines	7/3/2019	\$300,000.00	2	To provide technical assistance and support to help the Government improve basic local solid waste management infrastructure in selected tourism destinations in the Philippines.

Project Name	Grant #	P No.	Status	Activity Type	Mapping	Country/Region	Approval Date	Sum of Grant Amount	Pillar	Objective
National Marine Debris Management Support	TFOB1525	P170994	Active	ASA	EAP	Thailand	9/15/2019	\$450,000.00	2	To deepen knowledge, increase awareness, and strengthen coordination to inform strategies and support to the development of a National Action Plan for Marine Plastic Debris 2020-2027.
WACA Pollution Management	TFOB1181	P166218	Active	ASA	AFR	West Africa	8/9/2019	\$450,000.00	2	To assist governments to strengthen the resilience to pollution of targeted communities and areas in coastal Western Africa.
Support Plastic Policies and Investments to Reduce Ocean Plastics in the Philippines	TFOB1425	P170994	Active	ASA	EAP	Philippines	8/9/2019	\$450,000.00	2	To provide the government with evidence to support policies, plans and actions in relation to the management of Marine Plastics.
National Marine Debris Management Support	TFOB2100	P170994	Active	ASA	EAP	Malaysia	12/20/2019	\$400,000.00	2	To enhance diagnostics on plastics pollution, and support policies to help implement Malaysia's national initiatives on combating marine plastics as well as strategic engagement with potential for replicability to increase Malaysia's voice in ASEAN with regards to (i) developing a circular economy roadmap and (ii) looking at the feasibility of waste-to-energy solutions for remote islands.
Supporting Development of Sustainable Fisheries in Vietnam: Informing the policy framework and investments	TFOB3991; TFOB4048; TFOB4193	P167307	Active	ASA	EAP	Vietnam	8/26/2020	\$1,100,000.00	1, 2, 3	To inform the design of the Sustainable Fisheries Development Project (SFDP) (P171352) and strengthen the sustainability aspect of Vietnam's fisheries policy framework.
Reducing Risk in Aquaculture Investing: Disease Management	TFOB1188	P171307	Active	ASA	Global	World	8/9/2019	\$520,000.00	1	To improve the quality and sustainability of WBG investments in the aquaculture sector by promoting and facilitating adoption of best disease-control and health-management practices.
A Rapid Fishery Performance Diagnostic of the Gaza Strip Fishery along the Mediterranean	TFOB1115	P172349	Closed	ASA	MENA	West Bank and Gaza	8/9/2019	\$40,000.00	1	To (i) undertake a rapid diagnostic of Gaza fisheries along the Mediterranean coast, and (ii) make relevant recommendations for further analysis/activities to enhance the sustainability of the fishery and Gaza fishers' livelihoods.

Project Name	Grant #	P No.	Status	Activity Type	Mapping	Country/Region	Approval Date	Sum of Grant Amount	Pillar	Objective
Regional Initiative on Solid Waste Management and Environment Protection - Caribbean	TFOB3533	P174467	Active	ASA	LAC	Caribbean	5/26/2020	\$500,000.00	2	To develop concrete project proposals on integrated solid waste management to mitigate marine litter and pollution, including plastic pollution from land-based sources in selected Caribbean countries.
Enabling a National Action Plan for the Prevention and Reduction of Marine Litter in Lebanon	TFOB1828	P167818	Active	IPF	MENA	Lebanon	11/26/2019	\$400,000.00	2	To (i) establish a baseline for monitoring various marine sources of pollution; (ii) undertake upstream analysis of key sources of marine litter; and (iii) build national capacity to prevent and reduce pollution in marine environments.
China: Supporting Marine Plastic Debris Solutions	TFOB1748; TFOB1579; TFOB1524; TFOB2177	P170079	Active	ASA	EAP	China	8/23/2019	\$1,000,000.00	2	To support the Government to (i) deepen knowledge on marine debris plastics sources, transport and impacts; (ii) develop strategies for plastics monitoring and reduction in plastics use and releases to the environment; and (iii) inform and strengthen policies and raise awareness.
Support Plastic Policies and Investments to Reduce Ocean Plastics in Vietnam	TFOB2099	P167307	Active	ASA	EAP	Vietnam	12/16/2019	\$700,000.00	2	To support mapping of plastic waste and plastics' value chains to identify and implement policies and public and private investments.
WACA Sustainable Ports Partnership	TFOB2546; TFOB2561; TFOB2718	P166218	Active	ASA	AFR	West Africa	1/15/2020	\$450,000.00	2, 3, 4	To establish and operationalize a partnership of port authorities and operators to support reduction of negative environmental and social impacts from port infrastructure and operations on targeted communities and areas in coastal Western and Central Africa.
TA for sustainable municipal solid waste in India for reduced plastic pollution	TFOB1526	P168633	Active	IPF	SAR	India	9/30/2019	\$600,000.00	2	To support selected partner states in coming up with strategies to address the mismanaged plastic waste issue as a part of the overall municipal solid waste problem, that will consequently lead to reduction in their contribution to global marine litter.
Advancing the Blue Economy Agenda for Sustainable Growth in Pakistan	TFOB3356; TFOB3347; TFOB3357; TFOB3450	P166887	Active	IPF	SAR	Pakistan	6/30/2020	\$1,450,000.00	1, 2, 3, 4	To address the knowledge and evidence gaps in fisheries, blue tourism and marine pollution management to support advancing the Blue Economy Agenda for Sustainable Growth in Pakistan.

Project Name	Grant #	P No.	Status	Activity Type	Mapping	Country/Region	Approval Date	Sum of Grant Amount	Pillar	Objective
Mozambique ProBlue Program (MozAzul)	TF0B1351; TF0B1399; TF0B1388	PI32123	Active	IPF	AFR	Mozambique	9/25/2019	\$950,000.00	1, 2, 4	To strengthen the knowledge base on sustainable blue economy development in Mozambique.
Bridging the Institutional Gap in SWM	TF0B1348	PI71405	Active	ASA	Global	World	9/30/2019	\$280,000.00	2	To identify, compile and disseminate mechanisms for bridging the policy vs. implementation gap in solid waste management between central and subnational levels of government.
Inputs into the Systematic Country Diagnostic (SCD) and Country Partnership Framework (CPF) for Indonesia	TF0B1560	PI66466	Active	ASA	EAP	Indonesia	11/7/2019	\$140,000.00	4	To identify a set of priorities in the ocean economy in Indonesia through a diagnostic exercise.
Unleashing the Blue Economy of the Eastern Caribbean' Project (UBEEC)	TF0B1763; TF0B1728; TF0B1740; TF0B1757	PI71833	Active	IPF	LAC	Eastern Caribbean	11/27/2019	\$2,320,000.00	1, 2, 3, 4	To support the OECS Commission and member states to identify policy gaps, organizational reforms, and capacity needs at national and regional levels within the OECS to improve competitiveness of the blue economy and strengthen the marine and coastal assets on which it depends.
Cleaner Marine and Coastal Ecosystems in North Africa	TF0B2009	PI70596	Active	ASA	MENA	Middle East and North Africa	12/20/2019	\$550,000.00	2	On the regional level to contribute to raise common approaches and expand the influence to other Maghreb countries. On the national level to inform national strategies and investments for cleaner, plastic free, marine and coastal areas in Morocco and Tunisia.
Mangroves as a Protection from Coastal Flooding in two Selected West African Countries	TF0B2507	PI66218	Active	ASA	AFR	Africa	2/10/2020	\$450,000.00	4	To (i) provide input to operations in two countries, Ghana and Guinea, about the potential of mangroves to reduce coastal flooding and erosion, and provide co-benefits; (ii) build capacity in local institutions for carrying out similar assessments in other areas of West Africa; and (iii) promote greater understanding among West African governments of the benefits from investing in mangroves for coastal protection.

Project Name	Grant #	P No.	Status	Activity Type	Mapping	Country/Region	Approval Date	Sum of Grant Amount	Pillar	Objective
Charting a coastal blue economy development path for Cambodia	TF0B1775; TF0B1824; TF0B1832	PI72461	Active	ASA	EAP	Cambodia	11/27/2019	\$480,000.00	2, 3, 4	To generate knowledge and data to inform policy and institutional development and identify investment opportunities to develop Cambodia's coastal blue economy in a sustainable and inclusive manner.
Waste to Wealth: leveraging tourism for a blue green economy in Sierra Leone	TF0B2570; TF0B2575	PI64212	Active	IPF	AFR	Sierra Leone	2/27/2020	\$450,000.00	2, 3	To develop and pilot innovative private sector circular economy activities to reduce marine litter and enhance sustainable coastal tourism.
Use plastics and prepare for a more circular economy	TF0B2284; TF0B1958	PI60739/ PI63818	Active	IPF	SAR	Maldives	12/20/2019	\$400,000.00	2	To support the Maldives to combat marine plastics through activities linked to 3 ongoing World Bank investment projects to promote single use plastics phase-out and a transition to a more circular blue economy (Maldives Clean Environment Project, Maldives Enhancing Employability and Resilience of Youth Project, and Sustainable Fisheries Resources Development Project).
Oceans Governance Capacity Building	TF0B2340	PI73148	Active	ASA	Global	World	2/27/2020	\$280,000.00	3	To build the capacity on oceans governance (international legal instruments) of decision- and policy-makers and other stakeholders in client countries as well as of World Bank staff.
Support Policies and Investments to Reduce Ocean Plastics in Myanmar	TF0B2769	PI72379	Active	ASA	EAP	Myanmar	4/14/2020	\$450,000.00	2	To (i) establish solid data and evidence through scaled-up survey analysis for policy development and consensus building; and (ii) to build capacity and support Government of Myanmar to develop and operationalize the Plastic Pollution Management Action Plan, including priority plastic policies and investments.
Advancing Transparency in the Fisheries Sector through FITI	TF0B2052	PI55642	Active	IPF	AFR	Africa	1/10/2020	\$590,000.00	1	To improve transparency and multi-stakeholder collaboration for sustainable and equitable fisheries management in Seychelles and other countries by supporting the Government of Seychelles to host the Fisheries Transparency Initiative (FITI) International Secretariat.

Project Name	Grant #	P No.	Status	Activity Type	Mapping	Country/Region	Approval Date	Sum of Grant Amount	Pillar	Objective
Pollution Prevention in the Black Sea	TF0B2560	P173334	Active	ASA	ECA	Europe and Central Asia	2/11/2020	\$400,000.00	2	To improve national and regional knowledge for mitigating eutrophication, deoxygenation, invasive species, emerging pollutants, and litter, including plastics, in the Black Sea. This work complements WBG's engagements in other countries around the Black Sea and will contribute to increase regional coordination on marine pollution interventions.
Land-based and marine sources of plastic pollution in Sierra Leone	TF0B2650	P168608	Active	IPF	AFR	Sierra Leone	3/18/2020	\$490,000.00	2	To create a comprehensive knowledge platform regarding the current sources of marine pollution in Freetown, Sierra Leone, and establish strategies to reduce plastic consumption, enhance recycling initiatives, and improve waste management systems.
E&S Analysis for Offshore Wind Development Program	TF0B2508	P170090	Active	ASA	Global	World	2/27/2020	\$1,075,000.00	3	To enhance achievement of the Offshore Wind Development Program objectives by integrating environmental and social development considerations into the global KPs and country grant activities funded under the program.
Supporting sustainable fisheries development and resilient coastal economies in the Philippines	TF0B2466; TF0B2467	P171993	Active	ASA	EAP	Philippines	3/9/2020	\$750,000.00	1, 4	To improve the knowledge base for the Philippines fisheries sector and for measures for improved coastal resilience, to inform the design of the planned Philippine Fisheries and Coastal Resource Management (PFCRM) Project, and a potential Coastal Resilience Project.
Indonesia Oceans for Prosperity	TF0B2939; TF0B3043	P173391	Active	IPF	EAP	Indonesia	5/14/2020	\$775,000.00	1, 4	To inform the proposed 'Oceans for Prosperity' Phase 1 project and to improve the knowledge base for development of the Blue Economy in Indonesia.
Connecting social protection and the blue economy in a changing climate	TF0B3549	P174353	Active	ASA	Global	World	6/23/2020	\$650,000.00	1	To enhance understanding of how social protection programs can support workers engaged in fisheries while reducing overexploitation and enhancing sustainability of fisheries-based livelihoods.
Blue Economy Roadmap Support for Myanmar's Sustainable and Inclusive Growth	TF0B3042; TF0B3162; TF0B3155	P172379	Closed	ASA	EAP	Myanmar	5/21/2020	\$1255000	1, 3, 4	To generate knowledge and data to inform policy and investment opportunities to support Myanmar's blue economy planning and development.

Project Name	Grant #	P No.	Status	Activity Type	Mapping	Country/Region	Approval Date	Sum of Grant Amount	Pillar	Objective
Building Coastal Resilience and Supporting the Blue Economy in Saint-Louis, Senegal	TFOB3295	P166538	Active	IPF	AFR	Senegal	5/28/2020	\$622,000.00	4	To provide technical input and specialized expertise to the Government of Senegal to facilitate evidence-based decision-making and build capacity for urban and coastal resilience, particularly as it related to Nature-Based Solutions and livelihood diversification for coastal communities.
Advancing Circular Economy in South Africa	TFOB3956	P173517	Active	ASA	AFR	South Africa	6/10/2020	\$500,000.00	2	To support Government of South Africa to promote and develop a roadmap to advance circular economy in the country.
Information system and capacity building for Guinea's transitions to a Blue Economy	TFOB3534	P168613	Active	IPF	AFR	Guinea	6/11/2020	\$450,000.00	4	To strengthen intersectoral collaboration, availability of strategic data/analysis and capacity for integrated marine & coastal planning in Guinea.
Transparency and Accountability in Fisheries	TFOB4805	P161568	Active	IPF	SAR	Bangladesh	11/4/2020	\$452,000.00	1	To Improve the knowledge base for addressing domestic illegal, unreported, and unregulated fishing (IUU) in Bangladesh and, more broadly, in South-East Asia.
Regional Initiative on Solid Waste Management (SWM) and Marine Environment Protection - Central America Region	TFOB3650	P174701	Active	ASA	LAC	Latin America	6/16/2020	\$500,000.00	2	To develop concrete project proposals on integrated solid waste management to mitigate marine litter and pollution, including plastic pollution from land-based sources in selected Central America countries.
Supporting Solid Waste and Plastic Improvement Project	TFOB3649	P170976	Active	IPF	EAP	Cambodia	6/26/2020	\$600,000.00	2	To support selected cities and national ministries in Cambodia in the assessment and analysis of solid waste and plastics policies and investments that could be included in the Solid Waste and Plastics Improvement Project in Cambodia (P170976).
Plastic free cleaner marine and coastal ecosystems in Egypt	TFOB4437	P172548	Active	IPF	MENA	Egypt, Arab Republic of	10/7/2020	\$485,000.00	2	To support the development of strategies and investments for cleaner coastal and marine ecosystems in Egypt.
Analysis towards sustainable and cleaner environment development in Gaza Strip and West Bank	TFOB4012; TFOB4025	P170596	Active	Other	MENA	Gaza	6/26/2020	\$550,000.00	1, 2	To develop critical pathways for pollution management and sustainable fisheries in Gaza Strip and West Bank.

Project Name	Grant #	P No.	Status	Activity Type	Mapping	Country/Region	Approval Date	Sum of Grant Amount	Pillar	Objective
The Gambia Integrated Urban and Coastal Resilience Program	TFOB3632; TFOB3611	P172822	Active	ASA	AFR	The Gambia	6/30/2020	\$800,000.00	2	To strengthen the knowledge base on marine pollution (with focus on Solid Waste Management), and Nature-Based Solutions (NBS) to support the Government of The Gambia in developing an integrated approach to urban and coastal resilience.
Sustainable and Resilient Tourism on Small Islands and in Coastal Destinations	TFOB3648; TFOB3647; TFOB3656	P174821	Active	ASA	Global	World	6/30/2020	\$1,750,000.00	2, 3, 4	To improve understanding of how small island developing states (SIDS) and small coastal nations can increase their tourism competitiveness in the wake of COVID-19 through more sustainable and resilient tourism practices.
Actions and Policies to Reduce Coastal Zone Agricultural Nutrient Pollution in Africa, Latin America, and South Asia	TFOB3868	P175258	Active	ASA	Global	World	6/30/2020	\$500,000.00	2	To identify actions and to quantify the economy cost and benefit frontiers to mitigate and reverse land to marine agricultural nutrient pollution in selected coastal zones in Africa, Latin America and South Asia.
Pacific Ocean Advisory Program	TFOB4512; TFOB4383; TFOB4617; TFOB4619	P171214	Active	Other	EAP	Pacific Islands Countries	6/30/2020	\$9,800,000.00	1, 2, 3, 4	To inform and enhance the design, financing, implementation, coordination and monitoring of priority policies and investments for a sustainable ocean economy and a healthier and more resilient environment in selected Pacific Islands Countries (PICs).
Reducing Plastic Waste Disposed in Nepal's Rivers Draining in the Bay of Bengal	TFOB4148	P170798	Active	IPF	SAR	Nepal	9/2/2020	\$550,000.00	2	To increase awareness and regulatory capacity on managing use of single-use plastics and availability of investment options in recycling of and alternatives to plastics at selected sites/areas in Nepal.
Priorities for Sustainably Managing Sri Lanka's Fisheries and Ecosystems that Support Them	TFOB4851; TFOB4516	P171747	Active	ASA	SAR	Sri Lanka	10/29/2020	\$700,000.00	1, 4	To develop an improved knowledge base for prioritizing investments, institutional changes and policy actions in the Blue Economy of Sri Lanka, specifically focusing on fisheries.
Additional Financing: Pathways out of Plastic Pollution			Additional Financing				6/30/2020	\$1,500,000.00		

Project Name	Grant #	P No.	Status	Activity Type	Mapping	Country/Region	Approval Date	Sum of Grant Amount	Pillar	Objective
Additional Financing: Advancing the Blue Economy Agenda for Sustainable Growth in Pakistan										
Creating an Enabling Environment for Blue Economy Development in Jamaica	TF0B5064	P176291	Active	CP	LAC	Jamaica	11/18/2020	\$400,000.00	4	The objective of this activity is to help create enabling environment for fostering Jamaica's blue economy growth and sustainable use and management of ocean and marine resources.
Nature-Based and Non-Structural Coastal Flood Reduction Measures in Cap-Haitien, Haiti	TF0B5266; TF0B5258	P168951	Active	IPF	LAC	Haiti	2/4/2021	\$430,000.00	2, 4	To develop a roadmap to enhance flood protection in the coastal peripheries of Cap-Haitien, Haiti using nature-based and non-structural measures.
Fishery Sector Improvement in Sierra Leone	P126773		GFR Pending	IPF	AFR	Sierra Leone			1	To strengthen the knowledge base for fisheries policy reform in Sierra Leone.
Improving the fisheries sector and coastal plastic litter abatement in Liberia	P172012		GFR Pending	IPF	AFR	Liberia			1, 2	To strengthen the knowledge base on sustainable fisheries management and improve strategies for marine plastic pollution abatement in Liberia.
Reducing Marine Plastic Pollution and Creating Plastic Recycling Market in Lagos State, Nigeria	TF0B4878	P176178	Active	ASA	AFR	Nigeria	11/18/2020	\$950,000.00	2	The Development Objective is to develop an improved knowledge base and increased capacity for Lagos state to reduce marine plastic pollution by promoting sustainable plastic management (reduce, reuse, recycle).
Senegal Municipal Solid Waste Management Project	TF0B4867	P161477	Active	IPF	AFR	Senegal	12/8/2020	\$450,000.00	2	Strengthen the governance of solid waste management in Senegal and improve solid waste management services in selected municipalities.
Supporting sustainable livelihoods through marine debris control and coastal zone management in Zanzibar and mainland Tanzania	P176401		GFR Pending	ASA	AFR	Tanzania			2, 4	To promote smart, sustainable and inclusive growth in Tanzania and Zanzibar by supporting waste management strategies, coastal zone management knowledge and local livelihoods.

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Improving the Understanding of Marine Spatial Planning	TFOB4800	P175097	Active	KP	Global	World	12/8/2020	\$300,000.00	4	To improve the understanding of the potential for MSP to strengthen the World Bank Group's Blue Economy portfolio.
Central America Blue Economy Program (PROAZUL)	P172936		GFR Pending	IPF	LAC	Central America			1, 2, 3, 4	The development objective is to build regional and national capacity, strengthen institutional arrangements, and identify investment needs to foster sustainability, support job creation, and boost value addition in the blue economy of Central America, with a primary focus on El Salvador, Honduras and the Gulf of Fonseca.
Additional Financing: Unlocking India's Blue Economy Potential		P097985	GFR Pending	IPF	SAR					
Improving Water, Sanitation and Hygiene (WASH) in Fisheries and Aquaculture Value Chains	TFOB5110	P165298	Active	ASA	Global	World	2/3/2021	\$320,000.00	1	To develop diagnostic tools and guidance to inform Water, Sanitation, and Hygiene (WASH) interventions in fisheries and aquaculture and their value chains, to improve health and food safety, reduce the spread of COVID-19 and and reduce antimicrobial resistance.
Strengthening the governance for a Blue Development Framework in Galapagos, Ecuador	TFOB5033	P166698	Active	ASA	LAC	Ecuador	1/21/2021	\$50,000.00	4	To conduct a diagnosis of coastal and marine resources and management framework in the Galapagos towards a Blue Development Framework.
Building a baseline for a Blue Development Framework in Peru	TFOB5032	P166698	Active	ASA	LAC	Peru	1/21/2021	\$50,000.00	4	Sharing of international experiences regarding the blue economy to bring together the key productive and environment sectors.
Improving Framework Conditions for Reducing Marine Litter and Pollution in the Greater Accra Region, Ghana	TFOB5329	P164330	Active	IPF	AFR	Ghana	2/4/2021	\$900,000.00	2	To enhance the knowledge base, strengthen evidence-based policy decisions, promote social inclusion, and involve the private sector in improved waste management, reduction of marine litter and plastic pollution by promoting sustainable plastic management (reduce, reuse, recycle), with a focus on the Greater Accra Region (GAR), Ghana.

Project Name	Grant #	P No.	Status	Activity Type	Mapping	Country/Region	Approval Date	Sum of Grant Amount	Pillar	Objective
Informing subsidy reform in the fisheries sector	TF0B5489	P175345	Active	ASA	Global	World	3/17/2021	\$235,000.00	1	Improved understanding of the interplay of fisheries management, subsidies and trade in fish-harvesting services.
Additional Financing: WACA Pollution Management	P166218		GFR Pending	ASA	AFR					
Creating ENB's Value Proposition for Nature Based Solutions	TF0B5562	P176604	Active	KP	Global	World	3/30/2021	\$15,000.00	4	To define ENB's value proposition for the nature-based solutions agenda.
Additional Financing: Advancing Transparency in the Fisheries Sector through FITI			Additional Financing				4/8/2021	\$133,000.00		
Additional Financing: Support Plastic Policies and Investments to Reduce Marine Plastics in Vietnam			Additional Financing				4/9/2021	\$50,000.00		
Additional Financing: Fisheries Status Assessment Toolkit			Additional Financing				8/17/2020	\$20,000.00		
Assessment of Medical Waste Management in Dhaka	P172817		GFR Pending	IPF	SAR	Bangladesh			2	The objectives of the activity is to support the Bangladesh Environmental Sustainability and Transformation Project (BEST, P172817) to identify short-term and mid-term regulatory and investment priorities for the improvement of the management of medical wastes in Dhaka, Bangladesh.
Coastal City Strategies for Prevention of Generation and Transport of Plastic Litter to Oceans	TF0B6164	P169425	Active	KP	AFR	Tanzania		\$275,000.00	2	To improve city and national level government knowledge and capacity to reduce marine plastic litter through enhanced urban services, infrastructure and planning.
Boosting Costa Rica's Blue Economy	TF0B6263	P168475	Active	IPF	LAC	Costa Rica		\$50,000.00	4	Assisting Government of Costa Rica advance its Blue Economy agenda.

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People, Plastics, and the Blue Economy		P175659	GFR Pending	IPF	EAP	Indonesia, the Philippines, Vietnam			2	The objective of this proposal is to improve the understanding of vulnerabilities faced by informal sector workers, and to identify resulting opportunities for community-level livelihoods from plastics recycling, upcycling, and alternative materials in the Philippines, Vietnam and Indonesia.
The Economics, Regulation and Management of Desalination and Water Reuse		P165586	GFR Pending	ASA	Global	World			3	The objective of this activity is to inform the design and implementation of country clients' initiatives and World Bank operations aimed at mainstreaming the sustainable use of unconventional water resources, with a focus on sea water desalination and wastewater reuse.
International benchmarking, financial sustainability and analysis of solid waste to reduce marine pollution			GFR Pending	ASA	EAP	Vietnam			2	Undertake analytical work on the planning and financing of municipal solid and plastic waste to help the Government of Vietnam achieve its goals towards reduced pollution and marine littering.
Jamaica Plastic Waste Removal TA		P146965/ P146460	GFR Pending	ASA	LAC	Jamaica			2	To improve the evidence base and stakeholder understanding of marine litter prevention strategies in Jamaica as a model for regional replication.
Prevention of Marine Plastic Pollution in Albania		P176163	GFR Pending	Other	ECA	Albania			2	The development objective is to improve the understanding of plastic pollution in Albania and design solutions to reduce it.
Fisheries Sector Assessment Toolkit Rollout		P176920	GFR Pending	ASA	Global	World			1	To improve Bank Teams' and client countries' understanding, awareness and lessons learned from the use of tools in the Fisheries Sector Assessment Toolkit.
Addressing Plastic Waste from the Fishing and Aquaculture Sectors in PICs		P171214	GFR Pending	ASA	EAP	Pacific Islands Countries			2	To establish a baseline of knowledge on marine plastics sources, pathways and environmental and economic impacts to inform the design and application of a systemic approach at national and regional level across PICs to reduce the leakage of mismanaged plastic waste from the fishing and aquaculture sectors from entering the marine environment.

Project Name	Grant #	P No.	Status	Activity Type	Mapping	Country/Region	Approval Date	Sum of Grant Amount	Pillar	Objective
Behavior Change in Waste Management			GFR Pending	ASA	Global	World			2	Improved understanding of behavior change aspects of waste management practices.
Additional Financing: Pacific Ocean Advisory Program			Additional Financing				6/30/2021	\$850,000.00		
Additional Financing: WACA Pollution Management			Additional Financing				3/24/21	\$280,000.00		

LIST OF PROFISH-SUPPORTED ACTIVITIES

ASA Advisory Services & Analytics
 KP Knowledge Product
 LEN Technical assistance for lending project identification and preparation
 RE Recipient Executed

Project Name	Grant #	P No.	Status	Activity Type	Mapping	Country/Region	Closing Date	Sum of Grant Amount	Pillar	Objective
Philippines Climate Adaptation and Resilience	TFOB0329	P157325	Closed	LEN	EAP	National: Philippines	9/30/2019	\$29,260.85	1	Enable the Government to increase climate adaptation and resilience investments and their effectiveness in reducing climate risks impacting people and livelihoods in key vulnerable landscapes.
The Caribbean Oceans and Aquaculture Sustainability Facility (COAST)	TFOA6274	P153427	Closed	ASA	LCR	Regional: Caribbean	1/31/2020	\$1,477,021.79	1	To improve the resilience of marine ecosystems through innovative mechanisms to promote and stimulate sustainable blue growth in the Caribbean.
Benchmarking study of Contractual Arrangements for Aquaculture Producers and Aggregators	TFOB0549	P157801	Closed	LEN	SAR	National: Maldives	3/15/2020	\$27,771.77	1	Improve management of fisheries at regional and national levels including support to establish mariculture in targeted atolls in the Maldives.
Brief Assessment of Water Intensity of Freshwater Aquaculture and Implications of (Climate-Change induced incremental) Water Stress on the proposed intensification of aquaculture in India	TFOB0568	P171084	Closed	LEN	SAR	National: India	3/15/2020	\$29,650.55	1	Support the Government's Blue Revolution Program by sustainably doubling the production from aquatic resources through adoption of appropriate technology, biosecurity, genetic resource management systems and facilitating private sector investment in freshwater aquaculture.
A Rapid Fishery Performance Indicators Diagnostic of the Gaza	TFOB1115	P172349	Closed	ASA	MNA	National: West Bank and Gaza	5/29/2020	\$38,188.49	1	Undertake a rapid diagnostic of the status of the Gaza fishery along the Mediterranean coast, and make recommendations for further analysis and activities to enhance the sustainability of the fishery and fishers' livelihoods.
Costa Rica Sustainable Fisheries Development	TFOA8874	P168475	Closed	LEN	LCR	National: Costa Rica	6/30/2020	\$59,887.71	1	Provide key legal and stakeholder analysis on the Costa Rican fisheries sector for the preparation of the project.

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Blue Economy Diagnostic	TFOA7531	P167405	Closed	KP	Global	Global	6/30/2020	\$134,982.87	4	Support the bank in developing and testing a diagnostic methodology for assessing the constraints and opportunities for the development of the blue economy in coastal states.
Unlocking India's Blue Economy Potential	TF0B0538	P097985	Closed	LEN	SAR	National: India	12/30/2020	\$398,889.93	4	Strengthen integrated coastal zone management in selected States and Union Territories.
Supporting Resilient Coastal Economies in Vietnam	TFOA8326	P167307	Closed	ASA	EAP	National: Vietnam	12/30/2020	\$29,891.70	1	Inform how to manage the bio-economic assets (like in the fisheries sector) in coastal areas in a sustainable way in order to enhance the contribution of these assets resilient coastal economies.
Modeling coastal economy in Guinea	TFOA9799	P126773	Closed	LEN	AFW	Regional: Western Africa	12/31/2020	\$29,980.55	1	Inform the design and delivery of the West Africa Regional Fisheries Program in Guinea, to strengthen governance and management of targeted fisheries and improve handling of landed catch at selected sites.
Informing the Development of Vietnam's Blue Economy	TFOA9949	P167307	Active	ASA	EAP	National: Vietnam	12/31/2021	\$200,000.00	4	To strengthen integrated planning in coastal areas and identify policy and fiscal reforms to bolster the development of a blue economy and how to generate more value from fisheries and coastal tourism.
Kiribati Ocean Economy	TF0B1169	P171214	Active	ASA	EAP	Regional: Pacific Islands	6/30/2021	\$150,000.00	4	Support knowledge generation to inform decision making on how best to harness natural oceanic and coastal resources in Kiribati for sustainable and inclusive growth in Kiribati.
The Caribbean Oceans and Aquaculture Sustainability Facility (COAST)	TF0B1833	P171833	Active	LEN	LCR	Regional: OECS Countries	6/30/2022	\$872,978.26	1	To improve the competitiveness of the OECS' blue economy and strengthen the resilience of marine and coastal assets.
COAST Implementation - Caribbean Catastrophe Risk Insurance Facility (CCRIF)	TF0B2931	P171321	Active	RE	LCR	Regional: Caribbean	6/30/2022	\$2,400,000.00	1	To strengthen financial resilience of Caribbean countries through insuring against selected climate-related events that impact the fisheries sector.
PROFISH Analytics	TF092161	P097021	Closed	LEN	Global	Global	8/31/2022	\$4,185,766.36	1	Improved governance of global fisheries

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An explosive situation, a coordinated response-- curbing blast-fishing in Tanzania	TF0A9680	PI32123	Active	LEN	AFR	National: Tanzania	8/31/2022	\$30,000.00	1	Analyze the root causes that allowed blast fishing to prevail in Tanzania for decades, and the concerted response that recently ended it.
Creating an Enabling Environment for Blue Economy Development in Jamaica	TF0B5064	PI76291	Active	ASA	LCR	National: Jamaica	8/31/2022	\$400,000.00	4	To help create enabling environment for fostering Jamaica's blue economy growth and sustainable use and management of ocean and marine resources



PROBLUE

PROBLUE is an Umbrella 2.0 program, administered by the World Bank, that supports the development of integrated, sustainable, and healthy marine and coastal resources.

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