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Business Trends in Marine Conservation

Unlocking a Sustainable Blue Economy in Latin America and the Caribbean

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Introduction

The need for marine conservation in Latin America and the Caribbean

With the world's oceans covering 71% of the earth's surface, they have a critical role to play in the fight against climate change.[1] Our oceans have the capacity to store vast quantities of heat and greenhouse gases such as carbon dioxide (CO_2), absorbing more than 90% of additional heat and 25% of CO_2 emissions released into the atmosphere since the industrial revolution.[2] In addition, the marine environment contains significant (and largely undiscovered) biodiversity and produces 15% of animal protein consumed by the world's population.[3]

Conservation efforts aimed at preserving and restoring marine ecosystems are essential components of combatting climate change and restoring biodiversity, and of critical importance to Latin America and the Caribbean (LAC). The region is home to the second largest barrier reef in the world, the Mesoamerican Barrier Reef. Its marine and coastal ecosystems are key to the migratory routes and reproduction of multiple threatened marine species, including sea turtles, whale sharks, sperm whales and oceanic sharks. The region has over 23% of marine spaces under active conservation, and is making efforts to expand the conservation of its marine natural capital assets to reach the United Nations (UN) goal of 30% of marine ecosystems under protection by 2030.[4] In addition to their unique biodiversity, LAC's oceans, seas and coastal regions also provide other important ecosystem services, including coastal protection, vital for adapting to the more frequent storms and flooding as a result of climate change.

Marine and coastal areas are also of critical economic importance within LAC. Two thirds of LAC nations have more marine than terrestrial territory. For 18 LAC countries, the maritime areas of their economic exclusive zone exceeds 75% of total territory.[5] Over 25% of the population of the LAC region lives in coastal areas, with populations heavily dependent on key industries such as fisheries, aquaculture, shipping, and tourism for their livelihoods. It is estimated that the blue economy contributed over US$ 407 billion to the region's GDP and supports millions of jobs.[6] [7]

The outlook for the region's oceans, seas and marine resources is however challenging as a result of the growing impacts of climate change, and other human-induced pressures. For example, in the Caribbean, living coral cover has declined by up to 80% over the last 30 years due to a variety of factors, including chemical and nutrient pollution from land-based agricultural activities and climate change.[8] There are signs that ocean acidification, due to climate change, is negatively impacting coral reef growth and development in the region.[9] Furthermore, as oceans become increasingly acidic, they are less able to store carbon dioxide. One study found that the ocean's ability to store carbon could peak by 2100. Crossing this tipping point could trigger rapid and irreversible ecological crises.[10]

Illegal fishing is an ongoing problem in LAC, harming coastal livelihoods, threatening food security, reducing fish stocks and negatively impacting the wider marine environment.[11] Conservative estimates show that Latin America alone loses c.US$1 billion in revenue per year to illegal or unreported (IUU) fishing.[12] Marine pollution through ocean plastic waste is also a critical problem in LAC waters, with the amount of plastic waste found on Caribbean beaches far higher than the global average with over 2000 litter items per sq. km versus 573 worldwide.[13] Given the importance of tourism and fisheries in the LAC region, degraded marine and coastal environments pose a clear threat to livelihoods and economic growth.

Opportunities for private sector engagement in marine conservation

These challenges can however be addressed and there are already a range of successful business models which support climate mitigation and adaptation and a broader healthy marine environment as well as sustainable economic growth and provide the next generation of high-quality jobs and livelihoods. For example, the challenges associated with the region's sargassum bloom have led researchers, scientists, engineers and entrepreneurs to develop creative ways to tackle the problem, turning the seaweed into fertiliser, animal feed, biofuel or other commercial products, such as cosmetics. These initiatives have high potential for scale and could play a key role in both generating income and reducing the impact of sargassum on the region's coastlines.[1]

New innovative ways of funding marine conservation are also emerging as interest in blue natural capital markets has grown alongside evidence of the important role of marine and coastal ecosystem services. Examples include a wide range of projects across diverse sectors of the economy - from mangrove restoration projects delivering carbon sequestration,[14] seafood stock improvements,[15] and tourism benefits,[16] to coral reef preservation initiatives delivering natural coastal defence.[17]

Despite these opportunities, LAC's financing gap for ocean and coastal health remains high. The UN reports that Latin America and the Caribbean remains off-track towards most of the targets associated with Sustainable Development Goal 14, Life Below Water.[18] There is a clear need for more investment, from all sources, to effectively manage and expand marine conservation areas and to support those enterprises within the region that put a sustainable blue economy at the centre.

Through a series of case studies from the LAC region and worldwide, this report outlines a range of successful business models for marine conservation, highlighting opportunities for the private sector to become more engaged in supporting marine conservation, and ultimately demonstrating a robust business case to do so.

Overview of Key Marine Sectors in LAC

Fisheries
Estimated at 12.5m tonnes, contributing to food security and livelihoods. The sector is valued at US$15 billion[19]

Aquaculture:
Estimated 3.1 million tonnes of aquatic products (excluding seaweed) worth US$ 17.2 billion[20]

Tourism and Aquaculture:
Tourism accounted for 13.7% of GDP in the Caribbean and 8.2% in Latin America in 2019[21]

Natural Coastal Defences:
Coral reefs provide c. $US 4 billion a year and mangroves $US80 billion a year in coastal defence[22]

Maritime Transportation and Trade:
In 2020, global annual trade was estimated at US$80 billion with LAC contributing to 17% world maritime trade[23]

1 For over a decade, regions across Mexico and the Caribbean have suffered from an exponential increase in sargassum seaweed blooms. Millions of tonnes of floating sargassum seaweed have been smothering fragile seagrass habitats, suffocating coral reefs, harming fisheries, damaging human health in addition to the lucrative tourism industry. Thought to be exacerbated by fertilizer runoff into the ocean, as well as by warming sea temperatures, sargassum blooms have worsened considerably in recent years. For more information, see the Sargassum Information Hub: https://sargassumhub.org

UN Sustainable Blue Economy Finance Principles

The Sustainable Blue Economy Finance Principles were launched in 2018 and are the world's first global guiding framework for banks, insurers and investors with regards to financing the blue economy.[24]

Principle		Description
1	**Protective**	Supporting investments, activities and projects that take all possible measures to restore, protect or maintain the diversity, productivity, resilience, core functions, value and the overall health of marine ecosystems, as well as the livelihoods and communities dependent upon them.
2	**Compliant**	Supporting investments, activities and projects that are compliant with international, regional, national legal and other relevant frameworks which underpin sustainable development and ocean health.
3	**Risk-aware**	Decisions should be based on holistic and long-term assessments that account for economic, social and environmental values, quantified risks and systemic impacts and will adapt decision-making processes and activities to reflect new knowledge of the potential risks, cumulative impacts and opportunities associated with business activities.
4	**Systemic**	Identifying the systemic and cumulative impacts of our investments, activities and projects across value chains
5	**Inclusive**	Supporting investments, activities and projects that include, support and enhance local livelihoods, and engaging effectively with relevant stakeholders, identifying, responding to, and mitigating any issues arising from affected parties.
6	**Cooperative**	Cooperating with other financial institutions and relevant stakeholders to promote and implement these principles through sharing of knowledge about the ocean, best practices for a sustainable Blue Economy, lessons learned, perspectives and ideas.
7	**Transparent**	Making information available on any investment / banking / insurance activities and projects and their social, environmental and economic impacts (positive and negative), with due respect to confidentiality. Reporting will be regular.
8	**Purposeful**	Endeavouring to direct investment / banking / insurance to projects and activities that contribute directly to the achievement of Sustainable Development Goal 14 ("Conserve and sustainably use the oceans, seas and marine resources for sustainable development") and other Sustainable Development Goals especially those which contribute to good governance of the ocean.
9	**Impactful**	Supporting investments, projects and activities that go beyond the avoidance of harm to provide social, environmental and economic benefits from our ocean for both current and future generations.
10	**Precautionary**	Supporting investments, activities and projects in our ocean that have assessed the environmental and social risks and impacts of their activities based on sound scientific evidence. The precautionary principle is most relevant when scientific data is not available.
11	**Diversified**	Endeavouring to diversify investment / banking / insurance instruments to reach a wider range of sustainable development projects, for example in traditional and non-traditional maritime sectors, and in small and large-scale projects.
12	**Solution-driven**	Endeavouring to direct investment / banking / insurance to innovative commercial solutions to maritime issues (both land- and ocean-based), that have a positive impact on marine ecosystems and ocean-dependent livelihoods. So too, working to identify and to foster the business case for such projects, and to encouraging the adoption of best practices thus developed.
13	**Partnering**	Partnering with public, private and non-government sector entities to accelerate progress towards a sustainable Blue Economy, including in the establishment and implementation of coastal and maritime spatial planning approaches.
14	**Science-led**	Actively seeking to develop knowledge and data on the potential risks and impacts associated with our investment / banking / insurance activities, as well as encouraging sustainable finance opportunities in the Blue Economy. So too, endeavouring to share scientific information and data on the marine environment.

Assessing successful business models for marine conservation: A framework

To identify successful business models which can support marine conservation in LAC, a range of case studies from both within and outside the LAC region were reviewed. A set of criteria was developed to assess and score business models for their positive impact on marine conservation and local communities, as well as their potential to be financially sustainable and scalable over time. These 'success criteria' are also aligned with the United Nations Sustainable Blue Finance Principles, which are a widely recognized framework for banks, insurers and investors who wish to finance a sustainable blue economy.[25]

Environmental Impacts

Criteria	Alignment with Sustainable Blue Economy Finance principles
The project will clearly contribute to long-term marine habitat health and resilience - ensuring protection and enhancement of marine biodiversity (e.g., reducing pressures on fish stocks or other marine habitats).	**1 | 2 | 8 | 9 | 10 | 14**
The project has science-based targets with measurable outcomes which can be monitored and verified.	**4 | 7 | 9 | 14**
The project has a robust plan and methodology to monitor environmental impacts work, with a clear idea of the outcomes/metrics to be measured.	**1 | 2 | 8 | 7 | 9 | 10 | 14**

Social Impacts

Criteria	Alignment with Sustainable Blue Economy Finance principles
The project will tangibly benefit and empower the local community (e.g. by building local capacity and capability, increasing livelihood and employment opportunities).	**5 | 6 | 8 | 9 | 10**
Livelihood opportunities from the project will be accessible to and encourage participation of women, youth or otherwise marginalised community members.	**5 | 8 | 9**
Project has robust plan and methodology to monitor social impacts of its work, with a clear idea of metrics to be measured.	**4 | 7 | 9**

Financial Success

Criteria	Alignment with Sustainable Blue Economy Finance principles
The project is already financially viable or there is potential for it to be financially self-sufficient and support repayable finance (not expected to be 100% reliant on commercially-priced finance, but a blended finance approach is acceptable).	**12**
There is clear potential for project activities to be scaled and replicated elsewhere.	**9**

Governance Measures

Criteria	Alignment with Sustainable Blue Economy Finance principles
There is (or are detailed plans for) a suitable governance and management to ensure that effective project management and financial management is implemented.	**12**
The project has a robust monitoring and evaluation framework, and has transparent project implementation and reporting practices.	**4 | 7 | 9**
There is a strategy in place to engage or seek approval from community stakeholders and allow them to feed into decision making (e.g. through local consultations).	**1 | 5 | 8 | 10**
The project has strong social and environmental safeguards in place with risks identified and risk mitigation strategies in place.	**1 | 2**

These assessment criteria can be an important tool in evaluating and establishing 'best-in-class' marine conservation business models. Applying these criteria can also help to identify potential areas for improvement, as well as help to facilitate the long-term success and scalability of interventions.

Successful business models supporting marine conservation

It has been estimated that US$55 trillion of global GDP (over half of the world's GDP) is dependent on nature and the provision of ecosystem services, but is at risk of climate-related events and other human pressures. [26] As businesses assess both their impacts and dependencies on nature and climate related risks, there is a growing interest in evolving business models that can both enhance resilience and future proof their operations.[27]

Protecting and restoring marine ecosystems, such as mangroves, seagrasses and coral reefs not only protects biodiversity but also provides services such as coastal protection, storm surge protection and sustainable fisheries. These nature-based solutions offer cost-effective and sustainable approaches to building resilience by safeguarding livelihoods, promoting sustainable tourism and ensuring the long-term viability of businesses that rely on healthy marine ecosystems.

Moreover, where nature based solutions engage local communities in marine conservation efforts, fostering a sense of ownership, empowerment and sustainable economic opportunities, they can further contribute to overall community resilience. Opportunities can take a variety of forms, however for the purposes of this report, they are grouped into three broad categories:

1 Payments for Ecosystem Services (PES)

When beneficiaries or users of ecosystem services in marine conservation areas (e.g. natural flood management, biodiversity, carbon sequestration) are willing to pay for the provision of that service, this creates a revenue stream which can support the cost of preserving or restoring ecosystems.

2 Supply Chain Premium Model

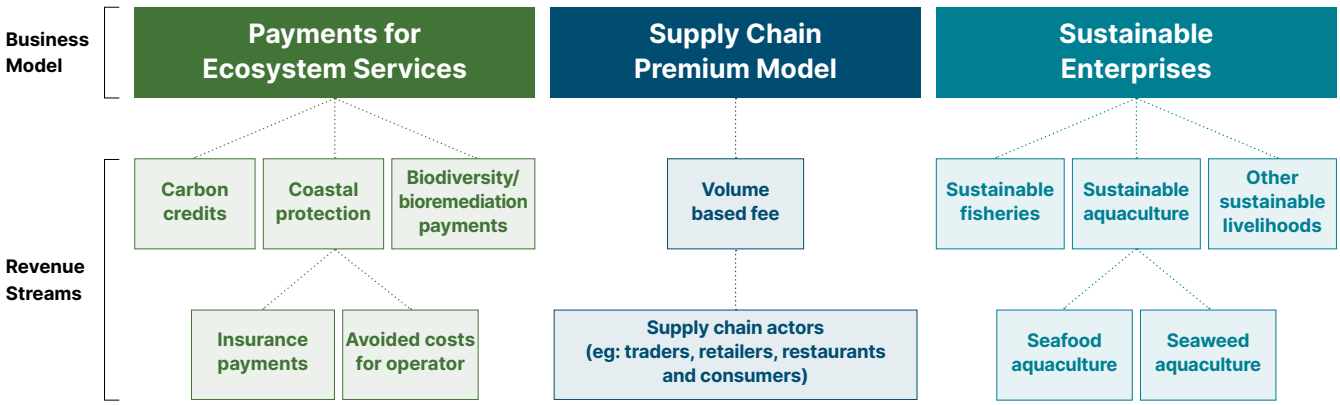
Where there is a willingness to pay for sustainability within a supply chain (e.g. fisheries supply chains), a premium can be applied on a volume or per product basis generating additional revenue which can be deployed to improve the sustainability of the marine environment.

3 Sustainable Enterprises

These are entities that rely on and generate revenue based on the sustainability and health of the marine environment (e.g. ecotourism and marine recreation).

Figure 1: Overview of key marine business models and revenue opportunities in LAC

Source: Finance Earth, 2023



As illustrated in Figure 1, there are a range of revenue streams associated with each business model and in many cases, a range of business models and associated revenue streams can be deployed in tandem, as illustrated through the case studies.

1 Payments for Ecosystem Services (PES)

Where there is a willingness to pay for ecosystem services, alongside established metrics and methodologies to guide the quantification of ecosystem services provided, it is possible to generate revenue through the sale of ecosystem services. The key ecosystem services that are relevant to marine conservation in LAC are blue carbon, biodiversity and coastal defence.

Blue Carbon: Blue carbon refers to the carbon sequestered and stored by marine or coastal ecosystems. These ecosystems play a crucial role in carbon sequestration, removing large amounts of atmospheric carbon at rates that have been shown to be 10 times higher than terrestrial environments.[28] The recognition of mangroves' ability to store carbon has seen the demand for blue carbon credits increase with over 970,000 blue carbon credits to-date[29] in a market that exceeded US$1 billion in 2021.[30]

Blue carbon from mangroves are the most developed source of blue carbon credits to-date due to strong scientific evidence of their ability to store carbon in their soils and biomass. Work is however also underway to advance the science around carbon sequestration in seagrass and saltmarsh ecosystems. There are a range of verified project methodologies and certification standards (including through Plan Vivo, Gold Standard and Verra) which apply to mangroves and help to provide certainty to the market around the integrity of the carbon credits being purchased.

The Blue Carbon Project in the Gulf of Morrosquillo in Colombia is the first 'blue' Verra Verified Carbon Standard (VCS) programme. The project is predicted to sequester almost one million tonnes of CO_2 in the next 30 years. The VCS credits sold will generate revenue for sustainably managing 7,561 hectares of coastal mangroves and their surrounding ecosystems.[31] Similar projects are being replicated across the region and demand for blue carbon credits currently outstrips supply.

There is also growing interest and demand for carbon credits with 'co-benefits' which include biodiversity or broader alignment with the Sustainable Development Goals. For example, Plan Vivo embeds benefits such as biodiversity or social parameters as part of their credit criteria. They developed the first blue carbon credit certification for mangroves in Mikoko Pamoja in Kenya and have a range of mangrove blue carbon projects in the pipeline across Central America.[32]

There are a range of private sector actors engaging in projects aiming to sell blue carbon credits where they see an opportunity to generate revenue through the sale of carbon credits to support marine conservation alongside other revenue generating activities – for example ecotourism operators, coastal property developers, and others.

PES Case Study: Blue Carbon

Iberostar – "Wave of Change" Carbon Neutrality Model

Benefits:	**Benefit Source:**	**Ecosystem:**
Carbon sequestration, natural coastal defence and eco-tourism	Mangrove restoration	Mangroves

Summary / Revenue Model

Iberostar Hotels & Resorts is a well-known hotel chain that operates across LAC, with 80% of their hotels situated on the coast. The chain has implemented a Net-Zero program called "Wave of Change" which aims to achieve carbon neutrality as well as eliminate single-use plastics, in order to protect coastal ecosystems and promote sustainable seafood sourcing across their properties.

Under the Wave of Change program, Iberostar has committed to reach carbon neutrality within the next 10 years. They are aiming to offset 75% of their emissions, across all their locations, via blue carbon solutions by 2030 through mangrove restoration.

Iberostar have partnered with the Dominican Republic's Ministry of the Environment to support mangrove restoration within the region. With funding from this public-private partnership, Iberostar has created 3 mangrove nurseries on their properties which have capacity to host 12,000 mangroves. In 2019, the chain's footprint was calculated as 172,500 metric tonnes, which means under their Net-Zero strategy, they pledge to protect approximately 138,379 acres of mangroves which is the equivalent to 560,000 mangroves.[33] The remaining 25% of its emissions will be offset via the purchase of carbon credits.[34]

Iberostar's restoration model not only supports their own climate change targets, but restoring mangroves also provide natural coastal defence, protecting their coastal properties during adverse weather. Furthermore, by protecting the natural beauty of the area, they entice more visitors to the area and generate revenue though tourism demand.

Key Success Factors

Restoration and/or conservation aligned with core business purpose: Iberostar aim to have 60% of their properties internalize investment and conduct sustainable ecosystem management. They are striving towards resilient ecosystems with functioning ecosystem services that will improve coastal health and benefit the environment and local communities.

Community engagement and benefit: Iberostar have embedded community benefits into their 2030 roadmap and aim to have 50% of their projects community-led. This will be driven by research that has identified models of community engagement that positively impact local communities. Their Net-Zero strategy also includes reducing their supply-chain emissions by directly promoting goods from the communities in hotel regions.

Diversifying revenue streams: Marine Nature-based Solutions (NbS) enhance risk reduction through the restoration and protection of coastal ecosystems, specifically mangroves and coral reefs. These are more sustainable and ultimately help to save costs relative to grey infrastructure. For example, NbS help to absorb, adapt and recover from the impacts of natural disasters as well as providing other ecosystem services, such as biodiversity and carbon sequestration. In addition to restoring mangroves, Iberostar are looking at restoring coral reefs which will entice visitors to the area and generate revenue.

Scoring Against KPIs:

Category	Score (H,M,L)	Rationale
Environmental Impacts	**H**	The Bavaro project has planted 6,900 mangroves so far, with the capacity to host over 12,000 mangroves across Bavaro, Bayah be and Puerto Plata.
Social Impacts	**H**	The project has embedded social benefits into its carbon roadmap, ensuring that all projects engage and educate local communities.
Governance Measures	**M**	There is no standard certification or governance measure for their mangrove restoration, however all their projects are backed by science with their decarbonization roadmap verified by the Science-Based Targets Initiative.
Financial Success	**N/A**	The strategy is still in its implementation phase. The financial success at this stage is still to be determined, however there is scope for significant cost-savings.

Biodiversity: Due to LAC's extensive coastline and diverse marine ecosystems, marine biodiversity is a crucial ecosystem service in LAC. Fisheries and overall food security in the region are reliant on marine biodiversity, providing livelihoods and a crucial source of protein for coastal communities. Diverse marine ecosystems also support other important economic activities, such as recreation.

The sale of biodiversity credits can work in a similar way to the sale of blue carbon credits, although standards and metrics for valuing biodiversity and the issuing of credits are still at a nascent stage. In LAC, biodiversity registry Biotrust, has announced its collaboration with five standards certifying 40 projects interested in issuing credits in Colombia over the next three years.[35] Currently El Globo Natural Reserve is the only live project and has issued 62,000 credits via Terrasos.[36] NGO OpWall are also working with Plan Vivo, exploring the issuance of biodiversity credits from mangrove projects in Mexico, Honduras, Costa Rica and Panama.

Natural Coastal Defence: The LAC region is highly vulnerable to natural disasters, including hurricanes, earthquakes and floods. These events can cause significant damage to coastal communities resulting in sizeable economic losses. For example, in 2000 Hurricane Eta caused damages in Central America of an estimated US$6.8 billion only to be followed by Hurricane Lota a few weeks later.[37] In 2017, parts of the Caribbean were devastated by hurricanes Irma and Maria.[38] Protecting marine ecosystems such as mangroves, saltmarshes and coral reefs helps provide coastal protection against the impacts of erosion, storm surges and flooding. For example, coral reefs are estimated to prevent more than US$836 million[39] and mangroves up to US$65 billion[40] in protection against infrastructure losses and damages.

There is growing interest from a range of private sector actors in exploring how natural coastal defence and natural flood management offer more cost-effective and nature-friendly opportunities than grey infrastructure. On the one hand, this can serve as a cost-saving/avoided loss for private sector actors in coastal areas (e.g. hotels, port operators, tourism operators), while on the other represent a revenue generating opportunity for operators such as insurance companies.

H/M/L scores:
H = criteria fully met **M** = criteria partially met **L** = criteria minimally met **N/A** = not applicable

Parametric insurance (insurance that covers the probability of a predefined event happening based on a specific trigger rather than actual loss occurred) is one new and innovative approach being applied to support marine conservation (e.g. mangroves, saltmarshes, and coral reefs). For example, the Nature Conservancy (TNC) recently developed the world's first coral reef insurance in Quintana Roo, Mexico with parameters specifically around hurricane damage.

The insurance is purchased by the Coastal Management Zone Trust (CMZT), which allocates funds from the private sector, governments and philanthropic grants, into coral reef conservation efforts and the purchasing of the parametric insurance product. When winds reach over 115mph, the policy is triggered and payments are issued to enable reef restoration work.[41] This minimises the cost and disruption to private sector entities that rely on coral reefs for their activities (such as hotels and dive schools) who benefit from avoided costs and lower revenue impact after a natural disaster. As a result of its success, the Mesoamerican Reef Fund and Willis Tower Watson Climate Resilience Hub are expanding the program through Belize, Guatemala Honduras.[42]

Marine conservation can also be supported directly by payments from insurance companies, generating revenue for project developers. For example, the Restoration Insurance Service Company (RISCO) is currently running a pilot program in the Philippines. In the pilot, ecosystem services derived from mangroves and target sites offering coastal protection for conservation activity are evaluated and remunerated by insurance companies as a means of reducing the probability of pay-outs due to damages.[43] Fees paid from insurance companies to RISCO for the information are used directly for mangrove conservation and restoration activities. Coastal asset owners buying the insurance benefit from discounted insurance premiums as a result of enhanced coastal resilience via mangrove conservation.[44]

A variation on this model can be seen in Pakistan, in a project supported by the UK's Development Finance Institution, British International Investment. Mangroves have been strategically replanted around a new wind turbine installation to act as a natural physical barrier and reduce damage to the infrastructure asset which is situated in a tidal delta. Mangroves strengthen the soil conditions and act as a buffer against water flow which in turn reduces the annual maintenance costs associated with the new infrastructure. The mangroves are estimated to save around US$ 35,000 – US$ 40,000 a year in maintenance costs (US$ 1 million over the 25-year asset lifetime) while also deliver another US$ 5 million in income to local communities which now have enhanced opportunities for sustainable crab and shrimp farming due to the increased presence of mangroves. Moreover, project developers are now exploring opportunities to develop a blue carbon dimension to the project, creating carbon credits from the restored mangroves and generating an additional revenue stream for the project consortium and local communities.[45]

2. Supply Chain Premium Model

A supply chain model is based on payments from supply chain actors for delivering an agreed set of sustainability outcomes. This model can be structured in a variety of ways, but at its core includes an additional fee or levy on top of the product being sold within the supply chain, in exchange for meeting specific criteria or implementing a change in practice. One of the attractive elements of this type of model is that there is already an established relationship between actors and an exchange of goods. Using this type of model also allows for the cost of sustainability to be incorporated more closely into the cost of the product.

A key example of where this model can be applied is the fisheries sector. Fisheries play a huge role in the economy within LAC bringing an estimated US$15 billion in 2012.[46] However it is estimated that 60% is sourced from unstainable practices.[47] Global estimates suggest that the fishing industry could generate an additional $US80 billion if they adopted sustainable practices.[48]

Many regions throughout LAC are now adopting more sustainable practices and as a result have secured enhanced market access and higher prices of up to 11% due to increased global demand for more sustainability sourced seafood. [49] For example, the Marine Stewardship Council (MSC) provides an international label for sustainably sourced fish which is widely used in a range of markets, including the US. Fisheries can gain this certification through initiatives such as Fishery Improvement Projects (FIPs) (see below).

Case Study: Supply Chain Premium Model

Fishery Improvement Projects (FIPs)	
Revenue type: Volume based fee	**Revenue source:** Supply chain actors

Summary / Revenue mechanism

Fishery Improvement Projects (FIPs) are a proven global model for transitioning fisheries towards improved fishing practices and management, benefiting people and nature. FIPs bring together multiple stakeholders in the supply chain to address environmental and social challenges through a coordinated action plan. There are now over 150 FIPs active worldwide, covering over 11% of global commercial wild catch, as verified by FisheryProgress.org. With ocean goods and services worth around US$2.5 trillion per year, the seafood business still holds much promise, now and in the future, if targeted investments are made toward fisheries recovery.[50] FIPs offer a proven approach for transitioning fisheries towards more sustainable footing, but often face funding challenges. Funding for FIPs is traditionally sourced from piecemeal grants from charitable foundations and companies. Often this does not cover the full cost of a FIP and can limit the pace and scale of the transition towards more sustainable fisheries.

Finance Earth has worked with WWF to design a new funding model to support fisheries improvement which is based around a volume based fee paid by supply chain actors to cover the full costs of FIP delivery. Supply chain actors including large traders, buyers, and retailers are supportive of FIPs given a range of factors including: i) improvement of the overall management of the fishery and fish stocks, ii) MSC certification responding to customer demand, and iii) the inclusion of indicators focused on improvement of the wider marine environment and communities. They have been supportive of a volume-based fee due to the transparency and fairness of the model in the sense that payments are linked to volumes, meaning the greater volume purchased from the fishery, the higher the overall contribution to improving the sustainability of the fishery. Supply chain actors are also supportive of a volume-based fee agreed at the outset of a FIP in that it provides predictability of costs over a set time period. This allows for the cost of sustainability to be incorporated into the cost of the product rather than paid for through donations or public funding.

FIPs have been successfully implemented across multiple regions in LAC including current FIPs in Peru, Ecuador and Mexico which include a range of private sector actors including local fishing associations, buyers, retailers and others. The primary activities undertaken by these programmes include stock assessments, catch level setting, reducing by-catch, monitoring, habitat restoration and improving working conditions.

Key success factors:
Restoration aligned with core business purpose: Ensuring the sustainability and overall stock of the fishery is aligned with the core business of fishing companies, buyers and retailers of marine products. It is in their direct interest to see the fishery improved to support their ongoing business model.
Transparency, measurability and verifiability: As there is greater demand for sustainability sourced products and increasing requirement for products that meet key sustainability criteria, actors along fisheries supply chains are incentivised to ensure that they can verify and track the impact of their sourcing on marine and coastal environments. With reporting of FIPs on fisheryprogress.org, all stakeholders can regularly review progress improving overall transparency.
Community engagement and benefit: FIPs are typically designed and implemented by organisations working directly in fishing communities and incorporate activities to ensure that FIPs deliver social benefits beyond just marine conservation. The achievement of certification of the fishery means that fishers will have better access to higher value markets.

Scoring Against KPIs:

Category	Score (H,M,L)	Rationale
Environmental Impacts	**H**	FIPs include a set of environmental criteria which they need to achieve to receive MSC certification which are aimed at improving the overall marine environment and sustainability of the fishery.
Social Impacts	**H**	There are a range of social criteria which must be met and reported against related to improving the livelihoods of fishers and fishing communities. FIPs are often co-designed and led by organisations operating directly within coastal communities.
Financial Success	**H**	The costs of delivering a FIP are fully covered by supply chain contributions and incorporated within the supply chain (e.g. pricing of the marine product) which makes this model highly replicable in markets where there is demand for sustainable products.
Governance Measures	**H**	FIPs must be registered and regularly report on progress on Fisheryprogress.org where based on progress the FIP receives a rating which can be transparently viewed by all parties.

3. Sustainable Enterprises Model

The damage to marine ecosystems in LAC can be linked to unsustainable activities whether through pollution or unsustainable harvesting of marine and terrestrial products. For example, it is estimated that 60% of mangroves destroyed between 2000 and 2016 were a result of land-use change due to shrimp farming, agriculture and rice farming.[51] Developing sustainable enterprises can help support the livelihoods of local populations in tandem with marine conservation.

There are a range of models that exist throughout LAC, particularly centred around eco-tourism, renewable energy and aquaculture. Within the eco-tourism industry, Airbnb and WWF have collaborated for the 'Big 7'. Within this model, Airbnb promotes regenerative tourism experiences for the conservation for 7 of the megafauna species in Baja California Sur, such as the bull shark and the humpback whale. Tourists pay Airbnb for responsible and sustainable marine experiences in protected areas. The collaboration aims to strengthen livelihoods within communities, creating economic benefits for local businesses and for Airbnb.

Sustainable enterprise models generally benefit more than one sector. For example, the implementation of Marine Protected Areas (MPAs) are highly beneficial for marine eco-tourism activities, however also benefit fisheries. No-take zones allow flourishing marine populations to spill over into adjacent regions. For example, MPAs such as Fernando de Noronha Marine National Park in Brazil and Galapagos Marine Reserve in Ecuador both experienced spillover of fish populations into areas adjacent to MPAs[52]. Businesses that are helping to tackle the Caribbean and Gulf of Mexico's sargassum problem through the creation of environmentally-friendly products like organic seaweed fertilizer are also benefiting the region's important tourism industry. One example is Algas Organics, the Caribbean's first indigenous agriculture biotech company.[53]

Aquaculture is a growing sector in the LAC region and where done well, can deliver multiple revenue opportunities while supporting a healthy marine environment. For example, seaweed is a versatile marine resource that can be used in multiple industries such as food and beverage, cosmetics, pharmaceuticals, biotechnology and agriculture. There are multiple aquaculture projects that have been successfully implemented throughout LAC. In particular, Integrated Multi-Trophic Aquaculture (IMTA) is occurring across the region which involves cultivating multiple species together in a symbiotic system, where one species utilizes the waste of another, reducing the environmental impact. Chile is a hub for IMTA projects.[54] Marine Farm on the Island of Chiloé combines salmon farming with the cultivation of seaweed and mussel farming, reducing environmental impact and creating additional revenue streams.[55]

There are also opportunities to generate revenue through the sale of products that are not derived directly from marine natural capital. Researchers have estimated that 10% of the worlds coral reefs are potentially threatened by sunscreen that washes off swimmers in reefs.[56] Sustainable enterprises can better support marine conservation through the sale of reef-friendly suncream. There is also a growing market for clothes made out recycled plastic. For example, 69% of all Patagonia materials will be recycled, including recycled polyester from used soda bottles for clothing.[57] The Ocean Cleanup is another example of an international non-profit project supporting marine conservation through the collection of plastic waste in the marine environment and working with partners to create durable plastic goods. An initial proof of concept product – The Ocean Cleanup Sunglasses, which sold out– demonstrated that high-value products can be created from ocean plastic. The Ocean Cleanup's business model is focused on developing key partnerships, like they have established with Kia, to leverage partner experience in product design, development, manufacturing, and go-to market strategies to develop durable products that are integrated into partner value chains. The goal is to cover the costs of cleaning up plastics in the ocean.[58] [59]

Case Study: Sustainable Enterprises

Cabo Pulmo MPA – Mexico

Revenue type: Fee for recreational services (scuba diving, snorkelling) due to increased fish stocks

Revenue source: Tourists

Summary / Revenue mechanism

The Cabo Pulmo Marine Protected Area (MPA) is located in the Gulf of California, off the eastern coast of the Baja California Peninsula in Mexico. It covers an area of approximately 17,500 hectares and includes a diverse range of habitats, including coral reefs, rocky reefs, seagrass beds, and sandy bottoms. The MPA was established in 1995 by the Mexican government, with the goal of conserving and protecting the marine ecosystems and biodiversity in the region. It is managed by the National Commission of Natural Protected Areas (CONANP) in collaboration with local communities and other stakeholders.

The establishment of strict fishing regulations, including the establishment of "no-take" zones, has allowed fish populations and marine ecosystems to recover significantly within the MPA, thus encouraging manifold increases in tourist and visitor numbers. The provision of alternative revenue streams from eco-tourism and related industries has reduced the dependencies of local communities on fishing, leading to the recovery of multiple habitats across the region (and thus creating a virtuous cycle).

The direct benefit to the local area has been estimated to be c.US$3.7 million, and c.US$5.8 million has been generated by visitor expenditures alone.[60] However, as the area becomes increasingly attractive to tourists, there is an increasing risk of overcrowding of tourism businesses, by large developers and smaller businesses moving into the area.

This has been evident in Cabo Pulmo which has experienced the most successful fish recovery and spill over result of any other MPA[67]. At the time of Cabo Pulmo's establishment in 1995, 35% of the MPA was designated as a "no take" zone: by 2009, there was a 460% increase in fish biomass levels, close to pre-fishing levels.[61] It is thought that a combination of strong cohesion of community efforts and ecological factors contributed to its success.[62]

Key success factors:

Community engagement and benefit: The engagement and active participation of local communities in conservation decisions and ongoing management has been a key driver behind the MPA's success.

Diversifying revenue streams: (i) The establishment of sustainable ecotourism activities has provided economic incentives for the local community to continue performing conservation work and has significantly reduced dependencies on destructive fishing practices. (ii) The revenue generated from activities such as snorkelling, diving, and guided tours has created alternative livelihood opportunities for fishermen, contributing to the long-term success of the MPA. There is also the potential of fish spillover into adjacent areas that could potentially have revenue benefits for fisheries outside the MPA.

Restoration aligned with business purpose: (i) The implementation of strict fishing regulations, including the establishment of "no-take" zones, has allowed fish populations and marine ecosystems to recover significantly within the MPA. (ii) The increase in biodiversity and biomass has resulted in large increases in tourist and science-led visitor numbers, further highlighting the importance and success of the MPA.
Transparency, measurability and verifiability: The Cabo Pulmo MPA is governed by a local co-operative that works in collaboration with local stakeholders, government associations and eNGOs to develop and enforce regulations, conduct regular monitoring, and make management decisions.

Scoring Against KPIs:

Category	Score (H,M,L)	Rationale
Environmental Impacts	**H**	The project was established in 1995, and by 2009 it was reported that fish biomass had increased by 460%, close to pre-fishing levels. There has been a 30% annual increase of predatory fish. However, there are risks posed by increasing tourism pressures.[63]
Social Impacts	**M**	The project has significantly increased livelihood opportunities for the local community, generating US$5.8 million per year of tourism revenues and US$1.2 million in fish exports. Furthermore, the value to Mexican society is estimated at US$332 million per year.[64] However, there are risks of overcrowding and resulting pressures on ecosystems in the area. Metrics for monitoring social outcomes are lacking; so too, there is a lack of evidence that marginalised groups are participating and benefiting.
Financial Success	**M**	Government support and funding has been limited, with upkeep of the MPA left to local community organisations[65]; however, the MPA has seen significant financial success from tourism, with c.US$3.7 million generated from the National Park directly, and c.US$5.8 million generated from adjacent areas such as accommodation, food and recreational activities including diving and snorkelling.[60]
Governance Measures	**M**	The project suffers from budgetary constraints and communication between various parties regarding priority actions has at times been challenging.[66] Furthermore, the government has authorised development of mega-resorts and the onus has been on the community and NGOs to appeal to the government.[67]

Conclusions and key learnings

These case studies evidence that successful business models for marine conservation do exist, which enable projects and marine conservation areas to diversify their income streams and access private capital. This can help them reduce their dependence on public and donor funds which often fall far short of the resources required by a particular conservation area. The private sector meanwhile, has an opportunity to both support marine conservation and other social outcomes while achieving a financial return. As the case studies have shown, there is not only a persuasive environmental case to be made for scaling-up marine conservation, there is an important socio-economic one with many initiatives reporting increased economic activity, jobs and livelihood opportunities alongside an improved marine environment.

Summary of barriers

While there are opportunities for private sector engagement in marine conservation in the LAC region, several barriers can impede involvement and investment into projects.

- **Regulatory and policy constraints:** Inadequate or unclear regulatory frameworks and policies related to marine conservation (e.g. the lack of commitment by governments to Article 6 of the Paris Agreement, whereby countries can voluntarily cooperate with each other to achieve emission reduction targets) can create uncertainties for the private sector. There is a need for streamlined and transparent regulatory and decision frameworks that provide incentives and support for private sector engagement.
- **Limited collaboration and partnerships:** Limited awareness about the importance of marine conservation, potential returns on investment and a lack of capacity among private sector entities can hinder engagement. Companies may not fully understand the potential benefits of investing in marine conservation or lack the necessary knowledge and skills to implement conservation practices effectively. Building awareness through education and capacity-building initiatives can help overcome this barrier.
- **Limited access to information and data:** Access to accurate and up-to-date information and data on marine ecosystems, biodiversity, and conservation initiatives at a local level can be limited, depending on the region. Improving data availability and sharing through partnerships between governments, research institutions, and the private sector can help address this barrier.
- **Lack of long-term investment horizon:** Marine conservation is often a long-term endeavor that requires sustained commitment and investment. Private sector entities with short-term profit expectations may hesitate to engage in conservation activities that yield returns over an extended period. Encouraging long-term investment horizons and providing mechanisms for patient capital, such as impact investment funds or blended finance models, can help address this barrier.

Overall, the private sector can play a key role in unlocking some of the opportunities in the blue economy in the LAC region. Efforts can include capacity-building initiatives, using appropriate financing mechanisms, and facilitating collaboration and partnerships amongst local stakeholders.

Summary of opportunities

As discussed above, there are numerous opportunities for the private sector to participate or invest in marine conservation projects in the LAC region.

- **Sustainable tourism:** Due to its extensive natural heritage and world renowned coastal areas, the LAC region has a large and thriving tourism industry. The private sector can play a vital role in promoting sustainable tourism practices that minimize the impact on marine ecosystems. This can include responsible tourism operations, eco-lodges, and guided tours that educate visitors about marine conservation.
- **Sustainable fisheries:** Many communities in the LAC region rely on fisheries for their livelihoods. Private sector involvement can help promote sustainable fishing practices, such as implementing responsible fishing techniques, supporting local fishers' cooperatives, and investing in sustainable aquaculture projects. Companies can also contribute by adopting traceability measures to ensure seafood products are sourced sustainably.
- **Blue carbon projects:** Coastal ecosystems like mangroves, seagrasses, and salt marshes are highly efficient in sequestering carbon dioxide and mitigating climate change. Private sector entities can invest in blue carbon projects by supporting the conservation and restoration of these ecosystems. Such initiatives can offer carbon reduction opportunities and contribute to climate targets.
- **Sustainable maritime transportation and trade:** The LAC region is a strategically important shipping route, accounting for 17% of maritime trade.[68] However, shipping and maritime transport can have significant consequences for local habitats and wildlife. Private sector organizations can invest in and promote the adoption of environmentally friendly practices and technologies for maritime transportation such as low-emission fuels, optimizing vessel designs, implementing energy saving & renewable energy measures and investing in sustainable port infrastructure.
- **Marine Protected Areas (MPAs):** Private sector organizations can collaborate with governments, NGOs, and local communities to establish and manage MPAs in the LAC region. This can involve funding and implementing conservation initiatives within designated areas, supporting research and monitoring efforts, and promoting sustainable practices in adjacent industries like fishing or tourism.
- **Education and raising awareness:** Private sector companies can contribute to marine conservation by investing in educational programs, awareness campaigns, and local capacity-building initiatives. By promoting environmental literacy and engaging local communities, the private sector can foster a culture of conservation and local stewardship of marine resources.

Summary of key learnings

While some marine conservation business models are relatively new, a series of lessons learned can nevertheless be identified.

1. **Supporting marine conservation makes business-sense.** Fisheries improvement programs for example have shown that sustainable management practices can be more profitable through an ability to charge premium prices for the end product, while support sustainability and higher-quality local livelihoods. Marine conservation activities have also been shown to boost economic activity, for example through their positive impact on tourism.
2. **Restoration or conservation aligned with core business purpose is more likely to be successful longer-term.** Where the restoration or conservation of marine areas are aligned with the core activities and profitability of a business, there is a greater likelihood that marine conservation will be a priority, rather than where restoration or conservation may simply be part of corporate social responsibility efforts.
3. **A mixed revenue model can be beneficial.** The ability to diversify and 'stack' revenue streams can help to support financial self-sufficiency, as well as attract the private sector to invest. Several projects have shown that reliance on one revenue stream (e.g. blue carbon) is often not sufficient to cover the full costs of marine conservation in a particular area. 'Stacking' revenues from various sources is often required. This reduces risk for both investors, as well as project developers. This is crucial, especially for business models that are reliant on more nascent marine natural capital markets.
4. **There is an important role for blended finance.** Blended finance models are supporting innovations in marine conservation, and helping to demonstrate proof of concept. This has been shown for example in the development of new insurance products where funds from donor partners or non-governmental organizations have supported LAC countries to implement insurance schemes targeted at strengthening sustainability and resilience amongst small-scale fishers. Blended finance has also been used to lower the cost of finance for specially-created MPA financing vehicles.
5. **'Blue' natural capital markets can support marine conservation and there is a benefit to developing high-quality blue carbon projects.** There is increasing international demand for blue carbon credits, particularly those that are considered 'high-quality', i.e. certified by an internationally recognized standards body, and which deliver clear and measurable co-benefits (such as enhanced biodiversity and community benefit). These credits attract a premium on voluntary carbon markets. In addition, emerging new natural capital markets like the biodiversity and coastal defense markets, will increase revenue opportunities marine conservation in the future.
6. **Community benefit and inclusion is key.** Communities must be engaged in project design from the outset, with clear benefit-share mechanisms and fair employment practices in place so that communities are fully invested in marine conservation efforts and can see tangible benefits for themselves and their wider community. Creating alternative sustainable high quality employment and livelihoods opportunities will increase incentives for local communities to engage in marine conservation. These are integral to ensuring the success of a business model.

7. **Clear policies and investment frameworks are essential for accelerating private sector participation.** By providing clear guidance and a supportive regulatory environment, policies and investment frameworks can stimulate private sector engagement in the marine conservation sector in the LAC region. For instance, as governments aim to implement Article 6 of the Paris Agreement, projects and initiatives which can address blue carbon will be of increasing significance and value. Any investment or decision frameworks should be developed through a collaborative and participatory process involving relevant local stakeholders, ensuring that they are well-tailored to the regional context and capable of driving sustainable practices and investments over the long term.

8. **Transparency, measurability and verifiability.** Where revenue is linked to achieving specific marine conservation targets, it is crucial that there is transparency around the metrics and methodologies being used for measuring impact, and that verification is conducted by independent third parties.

Appendices

Additional Case Study Examples of Successful Marine Conservation Business Models

Case Study 1:

Cefas COAST Parametric Insurance **Business Model: Payment for Ecosystem Services (PES)**	
Revenue type: Avoided costs for insurance providers	**Revenue source:** Policies that avoid the administrative cost attached to insurance models that rely on individual loss assessments.

Summary

The Cefas COAST (Coastal Observation, Simulation, and Analysis Tool) model is a parametric insurance tool developed by the Centre for Environment, Fisheries and Aquaculture Science (Cefas) in the United Kingdom. It aims to provide financial protection to coastal communities and businesses against the impacts of coastal hazards such as storms and flooding. The COAST model's strength lies in its ability to quickly assess and respond to hazardous events using objective triggers, with the main economic benefit being generated from cost savings relative to traditional insurance models. This enables timely financial support for recovery (payments are sent to participating governments within 14 days of the event) and reduces the administrative burden compared to traditional insurance models that rely on individual loss assessments.

Parametric insurance models can be an attractive methodology for the private sector to deploy, particularly in developing countries where historical data may be more limited or unreliable. Parametric insurance relies on easily quantifiable triggers such as weather data or seismic measurements, which not only reduces the administrative load for insurers but also increases access for communities that may struggle to access traditional insurance products due to high costs, lack of data or risk management infrastructure. Overall, parametric insurance allows for communities in less advantaged areas to increase their financial resilience, helping to stabilize local economies and support sustainable development overall.

Key Success Factors of the Project

Transparency, measurability and verifiability

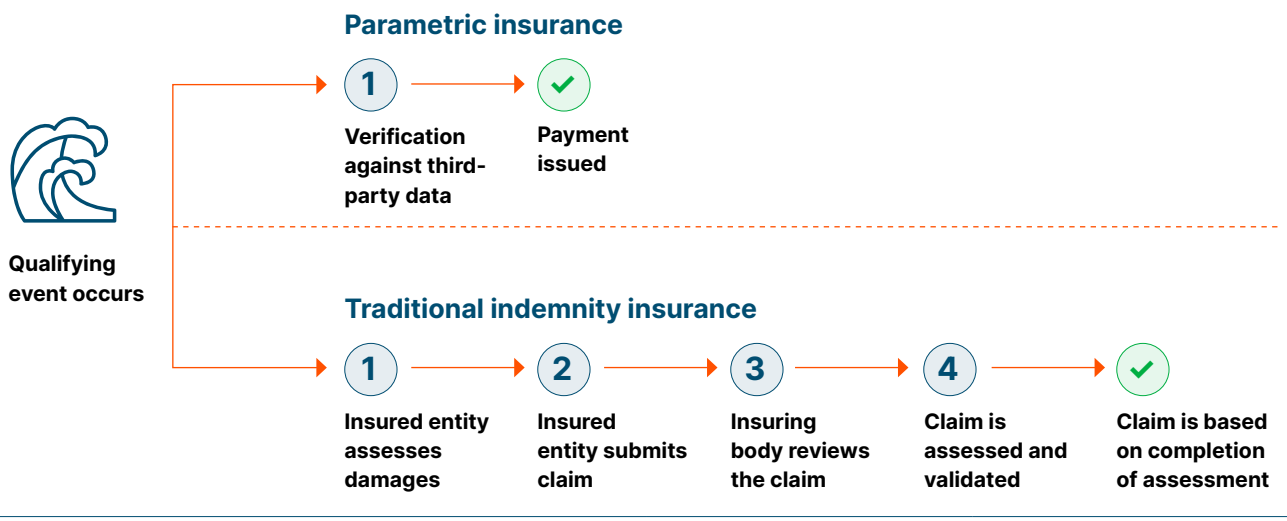
- Ultimately, the parametric design provides a transparent and efficient insurance mechanism for the fishing industry, and provides a transparent, efficient means of delivering funds quickly to protect the livelihoods of at-risk fisheries.
- Cefas works closely with fishers and industry stakeholders to identify the most relevant weather-related risks and establish trigger thresholds that reflect the impact on fishing activity. Customized coverage ensures that the insurance addresses the specific challenges faced by fishers in different regions.

Community engagement and benefit

- Close cooperation between stakeholders ensures that the insurance product meets the specific needs of fishers and aligns with the industry's risk profile.
- COAST registers all stakeholders in the fisheries value chain including women who are often unrepresented, and mostly act as fish vendors and processors.[69]
- From 2019 to 2022, there was a 32% overall increase of fisheries value chain stakeholders who were formally registered beneficiaries, and 12% of women fishers were formally registered.[70]

Public awareness raising

- Effective communication and education initiatives are key to the success of parametric insurance.
- Cefas engages with the fishing community to raise awareness about the insurance product, its benefits, and how it can help manage weather-related risks.
- Outreach activities ensure that fishers understand the insurance terms, triggers, and claims process, promoting participation and adoption of the insurance coverage.



Scoring Against KPIs:

Category	Score (H,M,L)	Rationale
Environmental Impacts	**M**	COAST improves the ability of the fishing industry to succeed in the subscribed regions. However, there are limited environmental/sustainable criteria for applicants, which could be improved.
Social Impacts	**M**	The fisheries sector in the Caribbean is a major source of livelihood and contributes significantly to food security and tourism in the region. Payments are made for financial losses caused by adverse weather (rough seas and heavy rainfall) preventing fishing activities, and for direct damages caused by tropical cyclones to vessels, equipment and infrastructure. However, there have been challenges to increasing participation: insurance premiums could be too expensive and inflexible given that fishing provides fluctuating incomes. Applications were also hindered by their complexity and requirements of formal documentation.
Financial Success	**M**	Significant cost savings have been generated by the COAST program through using a parametric insurance model (vs. a traditional insurance model) due to more efficient processes and easier verifiability with claims. The annual premium for each country was covered by the World Bank's PROFISH multi-donor trust fund, with an allocation of US $100,000 per country for 3 years (totalling $600,000).[71] Financing is currently primarily provided through concessionary capital today rather than commercial loans; as such, the project is not self-sustaining at present, but has the potential to be.
Governance Measures	**H**	COAST tracks pay-outs at the scale of individual beneficiaries through predefined procedures for transfers. They have assessed data available and provided feedback for participating governments to improve data collection processes.

Case Study 2:

Blue Finance - Blended Finance for Marine Protected Area in Belize
Business Model: Payment for Ecosystem Services (PES) / Sustainable Enterprises

Revenue type: Blue carbon credits, fish and recreational marine activities.

Revenue source: Buyers of blue carbon credits, supply chain actors for fish and tourist fees.

Summary

In partnership with IUCN and Mirova, Blue Finance has created a blended finance vehicle which provides capital towards developing and scaling several revenue-generating initiatives in the Turneffe Atoll region, including blue carbon projects, nature-based tourism and sustainable aquaculture and fisheries. Revenues are generated from carbon credits, eco-tourism fees and revenue sharing from new business models within aquaculture and fishery management. Over $1.2m of investment was raised at initial rollout, with a target of raising $50m for 20 MPAs by 2030. The initiative has been highly successful; since deployment of the first tranche of investments in 2021, over 35% of the Belize MPA operational budget is covered by revenues from eco-tourism fees, with the aim to increase this to over 100% by 2026.[72]

Overall, the blended finance model is a well-established means of raising finance for more innovative projects that can be easily replicated in other MPAs, creating the ability to generate sustainable returns for businesses while delivering for people and nature.

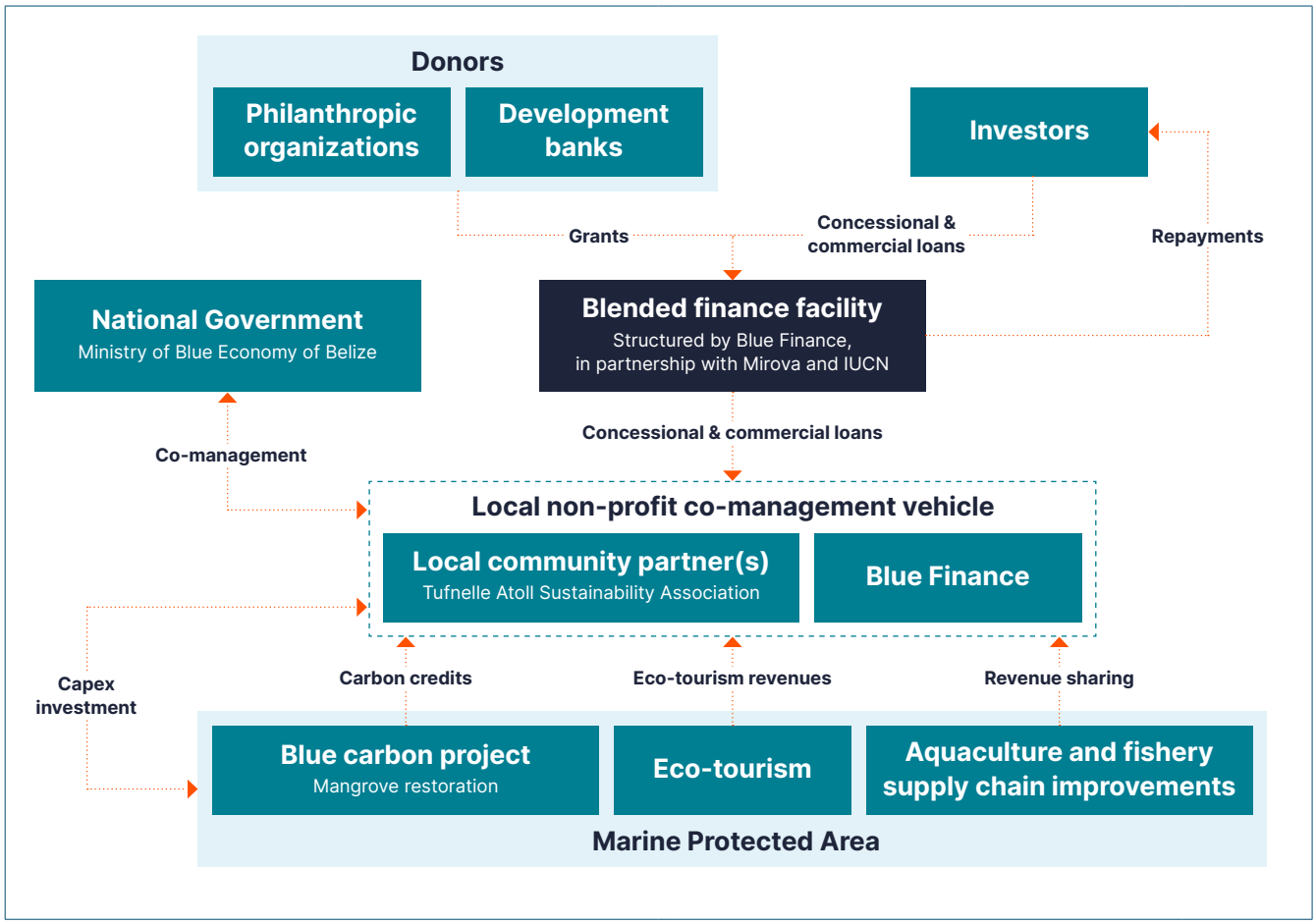
Key Success Factors of the Project

Community engagement and benefit

- In the case of this project, it was found that traditional technical assistance approaches such as ad-hoc or one-off training sessions were not sufficient.
- In order to create and sustain local expertise, Blue Finance works with existing partners and staff or hires new dedicated staff through a co-management entity to provide ongoing training and assistance on the ground.
- This not only supports the longevity of projects but also scalability.

Diversifying revenue streams

- MPA revenues are generated from visitor fees, revenues from sustainably managed fisheries and aquaculture facilities and blue carbon credits linked to conservation projects.
- The generation of multiple revenue streams reduces the risks associated with the model and provides greater certainty with regards to generating returns for investors.


Donors
Philanthropic organizations
Development banks
Investors
Grants
Concessional & commercial loans
Repayments
National Government
Ministry of Blue Economy of Belize
Blended finance facility
Structured by Blue Finance, in partnership with Mirova and IUCN
Co-management
Concessional & commercial loans
Local non-profit co-management vehicle
Local community partner(s)
Tufnelle Atoll Sustainability Association
Blue Finance
Capex investment
Carbon credits
Eco-tourism revenues
Revenue sharing
Blue carbon project
Mangrove restoration
Eco-tourism
Aquaculture and fishery supply chain improvements
Marine Protected Area

Scoring Against KPIs:

Category	Score (H,M,L)	Rationale
Environmental Impacts	**H**	The project will contribute to long-term marine habitat health and resilience through increased carbon sequestration, habitat maintenance (e.g. mangroves and coral reefs) and sustainable food provision. 132,000 ha of coral reef systems are now sustainably managed with many endangered species protected in the affected areas.[73]
Social Impacts	**M**	Enhancements of livelihoods for 1000+ local fishers in addition to job creation within the MPA. Plans with regards to access for marginalised groups unspecified.
Financial Success	**H**	There is a clear pathway for the project to be financially self-sufficient by 2026 with the ability to support repayable finance. There is also clear potential for the activities to be scaled effectively.
Governance Measures	**H**	Community engagement is deep-rooted and local communities were engaged in the design phases. The project has science-based targets and a robust methodology to measure the impacts of the work, with the outcomes for nature and people being verified by third parties such as Verra and Gold standard. Dedicated personnel at Blue Finance and at the co-management vehicle will act as performance managers.

Case Study 3:

Operation Wallacea / rePLANET
Business Model: Payment for Ecosystem Services (PES)

Revenue type: Blue carbon credits, biodiversity credits

Revenue source: Buyers of blue carbon credits and biodiversity credits

Summary

Operation Wallacea (Opwall) is a research and conservation organization that conducts biodiversity and ecological research expeditions in various remote locations around the world. Founded in 1995, the primary focus of the work of Opwall has pivoted away from research towards project development.

Opwall were the first organization in the world to devise a methodology for assigning biodiversity credits to habitat restoration projects. Together with the Hoffman Family Foundation and Global Footprint Network, Opwall have formed a new company, rePLANET, to implement habitat restoration projects that have the ability to generate both carbon and biodiversity credits for corporates. With a focus being on mangroves, which have the potential to sequester up to 1000 tonnes of carbon per hectare, community involvement is a strong pillar in project work. They have so far delivered over 10 restoration projects, with most of this being in Central America and the Caribbean, with projects being projected to generate over 10 million credits. It is estimated that a 1,500 ha mangrove restoration project can generate upwards of $20 million for investors and communities. A key differentiator of the Opwall model is the '60 plus 60' methodology for revenue sharing with communities, whereby not only are 60% of the upfront revenues shared with communities, but also 60% of any future revenues from verifying credits.[74]

For instance, in Mexico rePLANET are helping CONANP (the management body for the Cabo Pulmo MPA) to reforest areas of mangrove within the reserve. The project will make annual payments to the communities over a 25-year period as long as the mangroves are maintained, with additional emphasis on local upskilling and raising awareness. Corporate demand for credits has been high, outstripping supply by 300-400%.[75]

Overall, the work of Opwall/rePLANET provides important learnings on the importance of community involvement and benefit-sharing, and illustrates that many projects can be financially self-sufficient through the provision of ecosystem service benefits such as carbon sequestration and biodiversity improvements. So too, it illustrates that corporate demand for such credits is immensely high, and that corporates are seeking to achieve and validate tangible community benefits in addition to environmental and financial gains.

Key Success Factors of the Project

Clear restoration and/or conservation objectives

- Opwall/rePLANET projects aim to have a significant impact on conservation and biodiversity outcomes in the project areas.
- Care is taken to ensure that corporates who purchase the credits are taking actions in their broader supply chain to become more sustainable.

Transparency, measurability and verifiability

- Opwall/rePLANET are committed to transparency, adopting transparent reporting processes by providing publicly available information of the current state of restored habitats, who is benefitting from the community payments and carbon sequestration rates.
- Outcomes from projects are certified by Plan Vivo, one of the oldest verification bodies.

Stable and predictable revenues, and financial self-sufficiency

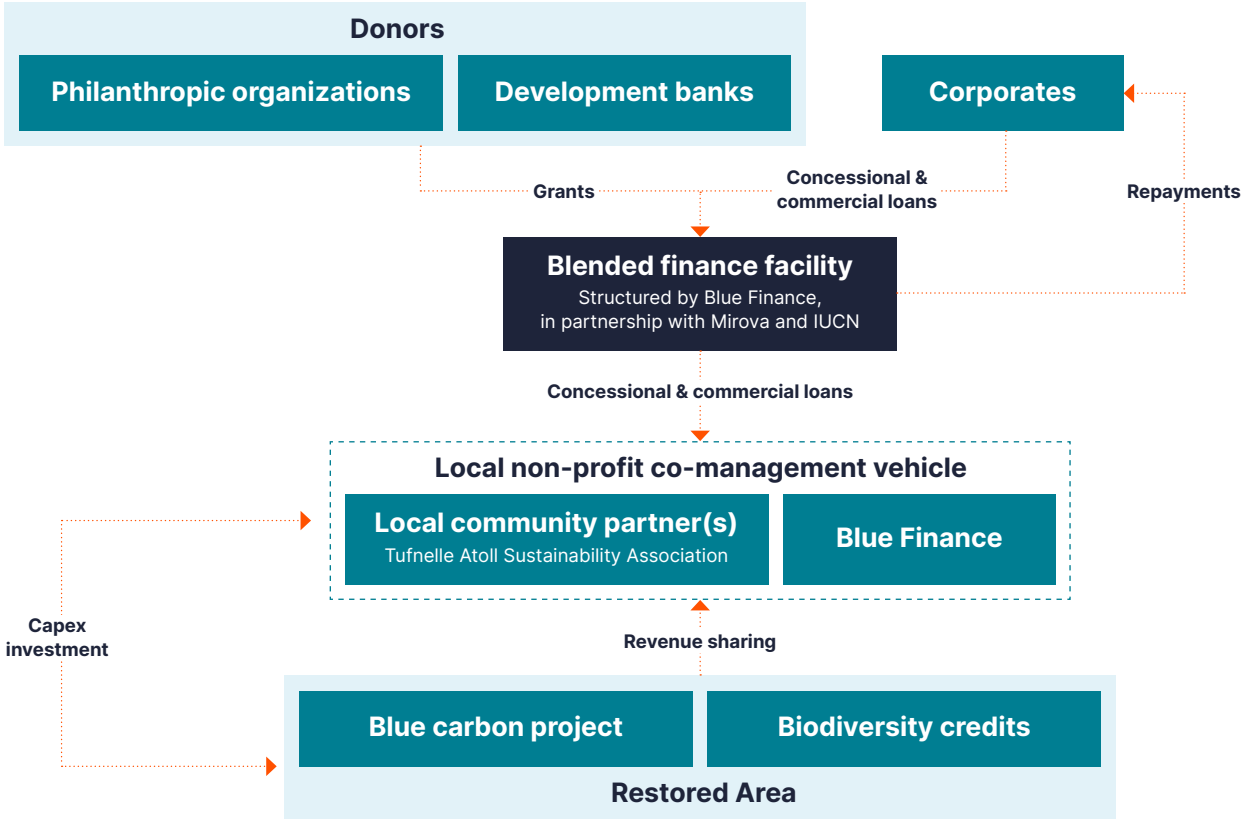
- Opwall/rePLANET projects have the potential to generate significant financial returns, with one 1,500 ha mangrove restoration project having the potential to generate over $20 million of carbon revenues alone.
- Projects also provide biodiversity credits, which can be bundled for corporate buyers.

Community engagement and benefit

- Opwall/rePLANET emphasize community engagement and capacity building and works closely with local communities.
- The organization recognizes the importance of involving local stakeholders in conservation efforts and respects indigenous knowledge and practices.
- This approach fosters partnerships, builds trust, and ensures that conservation efforts are culturally sensitive and sustainable.

Facilitating success for the long-term

- The success of Opwall/rePLANET projects is driven by their long-term commitment to the habitats, regions and communities in which they operate, with projects often spanning multiple years and involving continuous monitoring and evaluation.



Scoring Against KPIs:

Category	Score (H,M,L)	Rationale
Environmental Impacts	**H**	Operation Wallacea projects aim to have a significant impact on conservation and biodiversity outcomes in the project areas. In addition, management strategies are put in place in communities to ensure that benefits are long lasting e.g. many mangrove projects are projected to sequester over 500 tonnes of carbon over their lifetime.[76] By conducting research and monitoring, the organization provides valuable data and insights that inform conservation strategies and management decisions.
Social Impacts	**H**	The '60 plus 60' revenue sharing agreements facilitate material uplifts in the prosperity of the surrounding communities. So too, Opwall place a large emphasis on community upskilling and engagement, with a key focus on capacity building.
Financial Success	**H**	Corporate demand for credits generated by projects vastly surpasses supply. Opwall/rePLANET provide the capex necessary for projects, and enter revenue-sharing agreements with communities, providing at least 60% of current and future revenues for communities as long as the restored habitats are maintained. This '60 plus 60' model has been found to be a key driver of success behind both the longevity of projects and corporate interest.
Governance Measures	**H**	All of rePLANET's projects are certified by Plan Vivo, one of the oldest carbon certification bodies. In addition, Opwall/rePLANET have transparent reporting processes by providing publicly available information of the current state of restored habitats, who is benefitting from the community payments and carbon sequestration rates. Opwall/rePLANET survey teams will also be gathering annual biodiversity data on these replanted areas.

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IDB Invest, a member of the IDB Group, is a multilateral development bank committed to promoting the economic development of its member countries in Latin America and the Caribbean through the private sector. IDB Invest finances sustainable companies and projects to achieve financial results and maximize economic, social, and environmental development in the region. With a portfolio of $13.1 billion in asset management and 385 clients in 25 countries, IDB Invest provides innovative financial solutions and advisory services that meet the needs of its clients in a variety of industries.

IDB Invest has a dedicated advisory services team focused on climate change, and experienced climate finance practitioners in the various investment teams. The climate advisory team has accumulated experience in climate change mitigation and adaptation solutions across sectors and topics, including the blue economy.

Finance Earth is the UK's leading environmental impact investment boutique, providing financial advisory and fund management services across the natural and built environment. Finance Earth helps to create projects – and the investment vehicles to fund them – that balance positive outcomes for nature, communities and investors.

Finance Earth works in partnership with a broad range of clients including NGOs, government, social enterprises, foundations and aligned corporates to create investable environmental and social projects. At the same time, Finance Earth works with a range of investors to structure financial products that can accelerate the protection and restoration of nature.

The team currently manages over £50million of blended social and environmental impact funds and has designed over £500 million of impact investment structures.

Finance Earth is a wholly employee-owned social enterprise, with 51% of profits recycled into on-mission activities and investments.

Finance Earth is a trading name of Environmental Finance Limited, which is authorised and regulated by the Financial Conduct Authority (registration number: 831569).

The role of Advisory Services

IDB Invest has a dedicated advisory services team focused on climate change, and experienced climate finance practitioners in the various investment teams. The climate advisory team has accumulated experience in climate change mitigation and adaptation solutions across sectors and topics, including the blue economy.

IDB Invest provides technical advisory services to accelerate and support projects to achieve commercial viability. The Advisory Services Division of IDB Invest is dedicated to bridging the knowledge gap in nascent and emerging business models and markets, supporting project preparation, and developing technical capacity and capabilities.

In private sector projects, technical advisory (TA) is provided to facilitate IDB Invest's investment in high-impact projects and enterprises. In less mature markets that require first loss structures to enable crowding in of commercial capital, TA can serve as an enabler to generate data and information needed for the prospective investors' decision-making process. TA can be crucial in addressing uncertainty, increased risk, or higher upfront costs associated with investments in innovative business models which address climate change and support nature restoration.

Some examples of past support provided include the preparation of market studies to help demonstrate the demand for blue economy and marine solutions, the showcasing the benefits for companies and individuals, and initiatives to build capacity among project developers, among others.

During the last two years, the Advisory Services Division of IDB Invest has been working in collaboration with the UN Global Compact to define criteria for blue bonds and establish a roadmap for how blue bonds can help finance sustainable business solutions in Latin America and the Caribbean. This work included engaging with leading asset managers and banks to gather their insights on developing a framework that can be useful and scalable across industries. The result of this framework has led to the issuance of three blue bonds from IDB Invest which support ocean ecosystem health, economic growth, as well as improved livelihoods and jobs. These blue bonds can support a range of enterprises operating in or near marine environments which have an impact on oceans and freshwater ecosystems, and will help to facilitate a transition to a more sustainable blue economy overall.

For more information: https://www.idbinvest.org/en/publications

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