

GLOBAL FUND FOR CORAL REEFS

CONCEPT NOTE FOR PREPARATORY GRANT

Programme Title: MAR+Invest: The Business Development and Finance Facility of the MAR	Recipient Organisation(s): Mesoamerican Reef Fund
Programme Contact: María José Gonzalez. Executive Director. MAR Fund mjgonzalez@marfund.org	Programme Location(s): Mexico, Belize, Honduras, Guatemala
Programme Description: The MAR+Invest objective is to build upon existing MAR and partner Initiatives to develop and finance market-oriented solutions to fight the causes of coral reef degradation in the four MAR countries: Belize, Guatemala, Honduras, and Mexico.	Total Preparatory Grant Costs: USD 99,992
	Proposed Project Start Date: July 2021 Proposed Project End Date: December 2021
Key expected outputs <ul style="list-style-type: none"> - Full Programme Proposal submitted to the GFCR Executive Board in November 2021 - Key elements to be included in the full Programme Proposal: (a) Presence of resilient reefs; (2) Blended Finance to promote sustainable revenue streams and innovative finance mechanism to promote positive impacts on coral reef ecosystems and dependent communities; (3) Consortium of partners convened by MAR Fund; (4) M&E Strategy; (5) Budget and workplan tied to clear milestones - Identified a portfolio for the period 2022-2032, that has the capacity to absorb \$30M in commercial capital and \$10M in concessional capital and grants for business development offered by the GFCR. Portfolio likely to include opportunities in plastic pollutions, aquaculture, blue carbon, fisheries and MPAs - Institutionalized partnership between the MAR Fund, New Ventures, Healthy Reefs Initiative and the MAR Leadership Program. - Identified additional investors and partners to co-finance business development - Established impact policies for MAR+Invest and MARTAF. 	



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Signature of Recipient Organisation – Mesoamerican Reef Fund:

Print Name: María José González

Title: Executive Director

Signature: 

Date: 01-jul.-2021

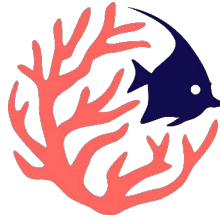
Signature of Executive Board UN Partner - UNDP:

Name: Andrew Hudson

Title: Head of Ocean and Water Governance Programme, UNDP

Signature: 

Date: 07-Jul-2021



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FACT SHEET

Title of the proposed Programme:

MAR+Invest: The Business Development and Finance Facility of the MAR

Convening Agent: The Mesoamerican Reef Fund - MAR Fund

Date: April 30, 2021

Lead contact person:

María José Gonzalez. Executive Director. MAR Fund
mjgonzalez@marfund.org

Other participating entities and contact persons:

Armando Laborde. Partner. New Ventures
armando@nvgroup.org

Melanie McField. Director. Healthy Reefs Initiative, Smithsonian Institution
mcfield@healthyreefs.org

María Eugenia Arreola. Director. MAR Leadership Program
Maria.arreola@fmcn.org

Name of Coral reef site: Mesoamerican Reef - MAR

Period of Implementation: Full programme proposal developed by December 31st 2021. Full programme proposal will have a 10-year vision.

Total amount requested:

Preparatory grant: US\$ 100k to develop a full programme proposal seeking:

Grant window capital amount request: US\$ 10M

Commercial window capital amount request: US\$ 30M



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PROPOSAL FOR JOINT PROGRAMME

1. Summary of the Joint Programme.

Purpose of the Programme:

MAR+Invest builds upon the work of existing organizations that commit resources, networks and expertise to generate an ecosystem where innovation, entrepreneurship, investment and conservation collaborate towards the identification, development and financing of market-oriented solutions to fight the causes of degradation of the MAR while attracting diverse sources of capital.

MAR+Invest will build the resilience of the MAR by investing in solutions that reduce local drivers of coral degradation like human pollution, agricultural runoff and mangrove deforestation, and by scaling and replicating solutions like seaweed farming that reduce the effects of acidification and global warming on the reef.

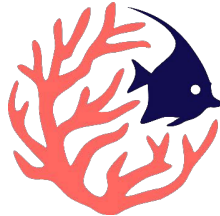
Description of the project area -MAR:

The Mesoamerican Reef's (MAR) coastline stretches for 1,000 kilometers from the tip of the Yucatan Peninsula in Mexico to the Bay Islands and coastal Honduras, through the Caribbean coast of Guatemala, all of Belize and Quintana Roo, Mexico. The MAR includes the largest barrier reef in the Atlantic and an integral component of an interconnected and transboundary system of coastal habitats. There are 1,230 km² of coral reef in the MAR ecoregion, 3,236 km² of mangroves and 4,318 km² of seagrass¹.

The MAR region is world renowned for its diverse natural wonders as well as its rich cultural and ethnic diversity. The interconnected habitats through oceanographic currents, stretching from high-peaked watersheds to deep ocean trenches provide food, shelter, breeding areas, migration routes and nursery grounds for a vast array of species, many of which are threatened. Coastal and marine resources include large expanses of mangrove forests and extensive shallow shelves that support important fisheries of the healthiest remaining reefs in the Caribbean, which protect shorelines, coastal communities and underpin tourism and fisheries industries.

The MAR is physically connected via a continuous marine corridor that stretches from northern Quintana Roo in Mexico to the Bay Islands of Honduras. It encompasses a complex coastal zone including mangroves, seagrass, and a variety of coral reef types linked to unexplored deep-sea habitats. Connecting many of these sites are the currents that transport the eggs and larvae of fish, invertebrates and other nekton. The MAR corridor is used as a migratory route by a host of marine megafauna including turtles, sharks, and the large finfish. The MAR is home to a vast number of species, including 82 critically endangered to threatened marine species (IUCN Red list) including manatees, whale sharks, goliath groupers and sawfish, and all of the threatened coral species, as well as economically critical species like spiny lobsters and queen conch.

¹ Mesoamerican Marine Habitat Analysis. Pedigree Environmental. 2021



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A recent paper by Lester et al found the Mesoamerican reef to have the highest live coral cover compared to other regions of the Caribbean². The higher diversity (including higher diversity of acroporid corals and herbivores) of the Indo-Pacific may provide greater scope for resilience (Roff & Mumby,), but some Indo-Pacific reefs also are experiencing rapid and large-scale coral losses (Hughes et al., [2017](#), [2019](#)). Lessons learned from studies of low diversity and more degraded Caribbean reefs may be increasingly valuable for global management of the reefs of tomorrow”³ (See Figure 1.)

The MAR contains some of the best populations of critically endangered *Acropora* coral and other threatened structurally complex coral species – providing ‘hope spots’⁴ rivaling coral reefs of half a century ago.

² Sarah Lester, Andrew Rassweiler, Sophie McCoy, Alexandra Dubel, Mary Donovan, Margaret Miller, Scott Miller, Benjamin Ruttenberg, Jameal Samhuri and Mark Hay, 2020. Caribbean Reefs of the Anthropocene: Variance in ecosystem metrics indicates bright spots on coral depauperate reefs. *Global Change Biology*, 26:4785-4799. DOI: [10.1111/gcb.15253](https://doi.org/10.1111/gcb.15253)

³ Rodríguez-Martínez RE, Banaszak AT, McField MD, Beltrán-Torres AU, Álvarez-Filip L (2014) Assessment of *Acropora palmata* in the Mesoamerican Reef System. *PLoS ONE* 9(4): e96140. doi:[10.1371/journal.pone.0096140](https://doi.org/10.1371/journal.pone.0096140)

⁴ Ángela Randazzo-Eisemann, Jesús Ernesto Arias-González, Laure Velez, Melanie McField, David Mouillot, The last hotspots of structural complexity as conservation targets in the Mesoamerican Coral Reef. *Biological Conservation*, Volume 256, 2021. <https://doi.org/10.1016/j.biocon.2021.109021>.



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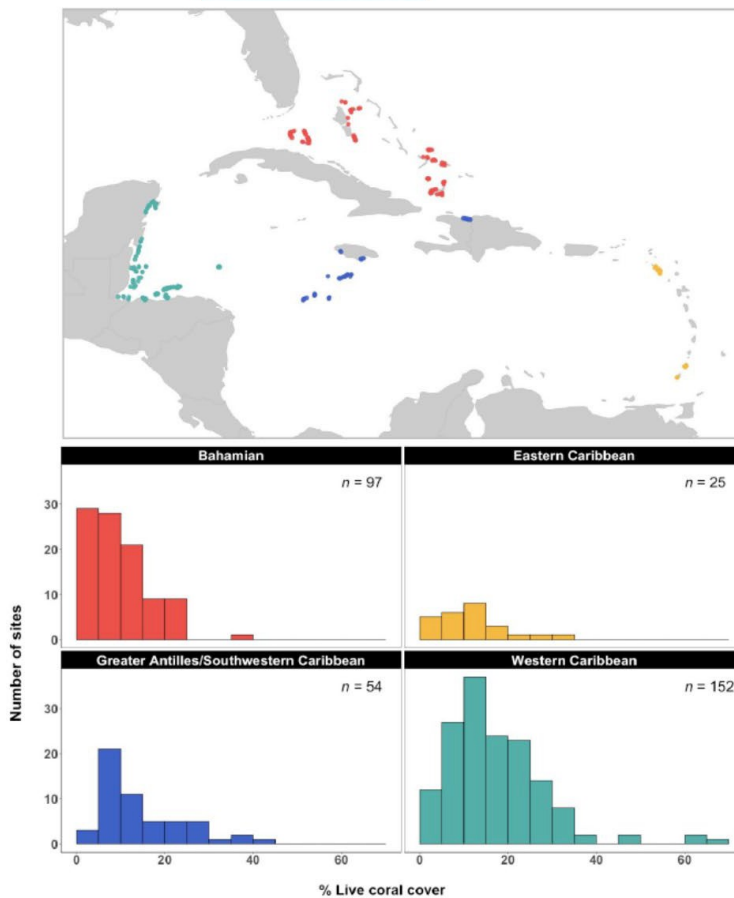
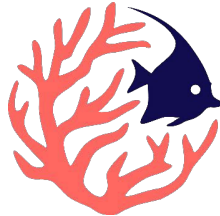


FIGURE 1 Map of Atlantic and Gulf Rapid Reef Assessment survey sites included in this analysis and histograms of mean site-level percent live coral cover within each ecoregion

Dr. Sylvia Earle, founder of Mission Blue, previously joined the Healthy Reefs Initiative on a diving expedition to Honduras and expressed optimism with regard to the conservation efforts in the Mesoamerican Reef: *“You must be doing something right, because here, there are plenty of reasons for hope. Cordelia Banks, off Roatán, Honduras, is one of the best places I have seen, even counting 50 years ago, an amazing stand with acres of staghorn coral.”*

Problems that the program intends to solve:

- Local pollution leading to coral reef degradation (e.g. agricultural/aquaculture runoff; inadequately treated sewage and sanitation from residential and tourist areas). (See Annex 2, section 4 for scale of the threats)
- Local communities lack capacity to adapt to climate change impacts which results in loss of integrity of MAR ecosystems, i.e., climate migration within the MAR is causing invasion into protected areas.
- Little capacity in the conservation sector to foster and develop market-based initiatives.
- Lack of a reef positive impact investment ecosystem: The MAR ecoregion doesn't have an ecosystem of investors, incubators, accelerators, business development service providers,



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academia and innovation hubs addressing coral positive innovation or broader blue economy needs.

- High risk profiles of the MAR countries deter international commercial investment. (Mexico is an exception). The MAR countries are among the poorest in Central and Latin America. They have large amounts of debt as percentage of GDP, are highly impacted by climate change which is affecting agricultural production, corruption is high, institutional capacity is low and are characterized by political instability.
- Limited green and blue finance approaches to finance reef positive change and climate smart transitions. Local banks in the region don't have financial products to serve the needs of small producers (agriculture, fisheries). Financial products are not designed to reward smart climate practices or transitions towards coral positive practices.
- Absence of models/proof of concept of the catalytic role that funding from Environmental Funds can have in the establishment of blended finance solutions for coral reefs.

Description of intervention:

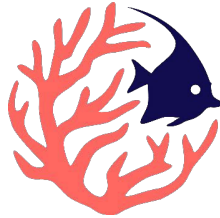
MAR+Invest is a business development and financing mechanism that supports conservation, protection and restoration of coral reefs and associated ecosystems (mangroves and seagrasses) –the natural capital of the MAR region– through the development and financing of commercially viable projects that deliver on coral reef positive outcomes.

Duration:

10 yrs. To be confirmed during the design stage.

Stage of Development:

- MAR+Invest is at the pre design stage. Partners of the facility have been engaged, prospect portfolio for design phase has been identified, partial co-financing for portfolio development has been identified, but amounts of co-financing are to be determined. Conversations about co-financing the development phase of projects have been started with The Nature Conservancy, World Wildlife Fund and the GEF Small Grants Programme of UNDP.
- The prospects of the MAR+ Invest portfolio are at different stages of development. (See annex 3 for detail.)



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2. Climate resilience of coral reefs in the proposed project area – Mesoamerican Reef

Resiliency of the coral reef ecosystem:

Healthy and functional coral reefs make an important contribution to both climate-change mitigation and adaptation. In the Mesoamerican Reef region, the well-being of about 3 million people, including indigenous communities, are dependent upon maintaining healthy reefs - while another 16 million foreign visitors travel to the region to explore its wonders every year. Caribbean reefs have historically been one of the most exposed regions to severe thermal anomalies (Heron et al. 2016) and resultant coral bleaching. A more recent Caribbean focused study of three decades of heat stress related to coral bleaching specifically found the MAR to be an important and potentially resilient area (Muñiz et al, 2019)⁵. Coral bleaching resilience in the MAR has been shown to be reduced by local chronic stressors such as nutrient input, sedimentation and fishing pressure (Carilli et al, 2009)⁶. Future projections predict that under the “business as usual” scenario (RCP 8.5) coral reefs are likely to be exposed to severe heat stress every year by mid-21st century (Muñiz et al, 2019). Consistent real-time reporting of coral bleaching events is necessary to validate any potential resilience models – the Healthy Reefs for Healthy People Initiative (HRI) Bleaching and Disease Watch program achieves this. This emergency response monitoring of bleaching events is based on a rapid method developed during Belize’s first bleaching event in 1995 (McField, 1999)⁷ which is now used across the Caribbean using with a real time web-based data entry and tracking tool that HRI helped develop (<https://www.agrra.org/coral-bleaching/>). This region may have the most organized collaborative data and science-based monitoring and evaluation of coral bleaching and reef health in the world.

3. Barriers hindering progress towards sustainable practices, development of financial instruments and barriers to private sector engagement related to coral reef ecosystem health.

Barriers:

For private investment, Honduras, Guatemala and Belize are countries with extremely high-risk profiles, a result of structural factors, extreme exposure to climate change and economic volatility. Although Mexico does not fall into the same country risk category, when it comes to attracting capital towards a blue economy to protect and restore the MAR, it faces the same barriers as its neighbors, including:

A. Lack of readiness and effective support blocks access to finance for entrepreneurship in México and Central America:

The lack of investment readiness and scalable propositions are among the main barriers that investors find in the region. A recent survey conducted by GALI⁸ pointed to the very early stage and lack of formality of Central American businesses as unattractive to finance providers. The

⁵<https://www.researchgate.net/publication/334745248> Three decades of heat stress exposure in Caribbean coral reefs a new regional delineation to enhance conservation

⁶ 127 Century-scale records of coral growth rates indicate that local stressors reduce coral thermal tolerance threshold. JE Carilli, RD Norris, B Black SM Walsh, M McField. Global Change Biology 16 (4), 1247-1257, 2010

⁷ Coral response during and after mass bleaching in Belize MD McField. Bulletin of Marine Science 64 (1), 155-172, 1999

⁸ <https://www.galidata.org/>



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evaluation also noted that accelerators are not doing enough to prepare entrepreneurs to take on investment or to engage the investment community⁹.

B. Conservation sphere lacks entrepreneurial solutions to tap into available capital:

In 2015, over US\$ 3B in private capital remained on the table as investors struggled to find deals that met criteria for both environmental and financial returns¹⁰. At a global scale, the results of this broken system of conservation, entrepreneurship and investment is estimated as a gap of \$250 to \$350 billion to preserve and restore ecosystems¹¹.

Convergence's database of blended finance¹² deals within conservation finance in Latin America, (2019) shows that despite its wealth in natural capital, the region only accounts for 14% of deployed resources under blended structures. Another of Convergence's finding shows that most blended finance transactions with conservation mandates have largely focused on sustainable agriculture and sustainable forestry/reforestation, followed by land restoration. Only a small number of transactions have been focused on aquaculture and ecotourism, two of the key areas of enterprise development that could achieve reach coral positive outcomes.

C. No collaboration between investment and conservation ecosystems in the MAR:

Collaboration between development, private capital and conservation actors has been effective in LAC for fighting deforestation in the Amazon and reducing overfishing in Chile, Perú and México. However, other topics that may represent deals of smaller size, where aggregation of portfolios and capital is more challenging and with less connected and educated actors, have not been successful in articulating collaboration in the MAR.

⁹GALI report finding from data analysis and interviews:

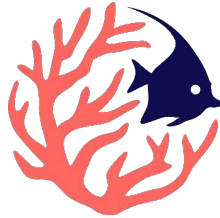
1. Entrepreneurs are not meeting their own fundraising expectations. Interviews with investors and accelerator representatives suggest that entrepreneur fundraising expectations are not realistic, and that regional and economic constraints limit access to capital. Entrepreneurs are most likely to seek and secure debt, with little access to equity financing and challenges in securing favorable loans.
2. Investors largely point to a lack of investment readiness and scalable business models. Interviewed investors pointed to the very early stage and lack of formality of Central American businesses as unattractive to finance providers, alongside the inherent economic volatility in the region making revenues unpredictable. Several also feel that accelerators are not doing enough to prepare entrepreneurs to take on investment or to engage the investment community.
3. Accelerators focus on financial education but acknowledge a lack of financing designed for early-stage enterprises. Accelerator representatives agree that entrepreneurs need significant improvement in their investment readiness and confirmed that their programs aim to close this gap. But interviewees also noted that traditional financiers have unrealistic expectations of startups and that the lack of right-sized and flexible capital is a major constraint.

https://www.galidata.org/assets/report/pdf/Knowledge%20Brief_Central%20America_EN.pdf

¹⁰ https://www.nature.org/content/dam/tnc/nature/en/documents/state_of_private_investment_in_conservation_2016.pdf

¹¹ <https://www.mckinsey.com/business-functions/sustainability/our-insights/taking-conservation-finance-to-scale>

¹² <https://www.convergence.finance/news-and-events/news/4akfHG7NMBvgX6wluH5o93/view>



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4. Thesis and theory of change of the Programme.

Desired change:

The MAR is protected, conserved and restored through a network of MAR positive enterprises, a system that sustains Reef positive innovation and is financed by blended sources of capital, with the ultimate goal of attracting private capital and creating diverse sustainable finance mechanisms, for example user fees, endowment and profit-sharing schemes.

Problem statement:

The absence of collaboration between commercial investment and conservation is blocking the attraction of private capital for blue investment in the MAR. Without business propositions that are attractive for commercial capital, the gap of capital required for coral conservation and restoration will not be closed, risking the future of the MAR, the communities and economies that depend on it.

Beneficiaries:

Following a socio ecological systems¹³ approach, MAR+Invest will benefit individuals, local communities, organizations, countries and the marine ecosystems and natural capital of the MAR. Projects seeking support must meet the impact first investment criteria (social and environmental), challenge “business as usual” models that harm the MAR and its dependent communities and address threats affecting the MAR. Priority beneficiaries are reef-dependent communities, women, vulnerable populations and change makers at the organizational level.

A recent study advanced by MAR Fund and Willis Towers Watson¹⁴ for InsuResilience Fund¹⁵, found that the population that benefits from reef sites in the MAR is 1,978,539 inhabitants.

The following are projections of the number of beneficiaries in some of the prospected portfolio projects:

Transitioning small-scale farmers of sugar cane in Belize towards Climate Smart Agriculture: According to WWF Central America¹⁶, the total number of small-scale farmers in the project is 5,008. WWF assumes that 60% of the farmers will enroll in the transition, which is equivalent to 3,004.

Blue Carbon in two pilot sites in Quintana Roo: The project assumption is that all inhabitants in the pilot sites will receive adaptation and risk mitigation-related benefits.

Cozumel Island: 73,193

Yum Balam Flora and Fauna Protection Area: 2,957

Landowners and community workers will receive direct financial benefits but at the moment a full assessment is needed¹⁷.

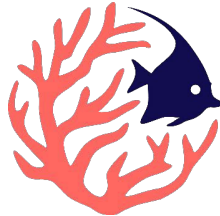
¹³ <https://www.systemsinnovation.io/glossary/socio%AD-ecological-systems>

¹⁴ www.willistowerswatson.com

¹⁵ www.insuresilience-solutions-fund.org

¹⁶ Projections completed in March 2021.

¹⁷ Information provided by Resiliencia Azul A.C. Project Owner.



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Total beneficiaries: 76,150

Construction, optimization and operationalization of treatment plants in the Bay Islands of Honduras¹⁸:

Guanaja: 3,000-4,000

Utila: 7,000-8,000

Roatan:

Coxen Hole: 5,000-6,000

Los Maestros: 260

West End: 440

Total beneficiaries: 15,700-18,700

According to WWF Central America, the transition towards super intensive technologies of the Shrimp Farming sector in Belize will generate 2,000 direct jobs.

Total direct beneficiaries: 2,000.

MAR+Invest outcomes and GFCR progress:

Outcome 1: Protected and priority areas of the MAR are financially sustainable

Outcome 2: Livelihoods of coral reef-dependent communities are MAR positive and have increased resilience to climate change

Outcome 3: MAR Emergency Fund¹⁹ effectively responds to major shocks.

The architecture of the MAR+Invest program reflects the expected outcomes of GFCR: Financial Sustainability of Protected Areas acts upon outcome 1, MAR Relief upon outcome 2, and MAR Rescue upon outcome 4.

Rationale:

MAR+Invest is a partnership of private and civil society organizations with the ability to generate a platform where conservation, development, government, philanthropic and private players can effectively collaborate and innovate to sustain MAR+ enterprise development, resulting in the attraction of new sources of capital to continuously protect, manage and restore the largest barrier reef in the Atlantic.

Based on scenario planning, the facility uses a Lean Startup framework of enterprise development to move from a negative scenario into a positive one for MAR's natural capital. (Figure1). This new partnership will enable a systemic and long-term solution for adaptive transformations to reach the desired change via the aggregation of fully funded and operational MAR+ businesses.

The principles of additionality and sustainability of MAR+Invest:

Endowments of Environmental Trust Funds can play a catalytic role in the generation of blended finance models for coral conservation and conservation in general. These endowments can attract commercial capital for investment-ready business opportunities for investors. They can also play

¹⁸ Information provided by POLOS Water Board <https://www.facebook.com/Polos-Water-Association-540719746131445/> and CORAL Reef Alliance (Honduras) www.coral.org

¹⁹ MAR Emergency Fund: Finance mechanism that provides emergency finance for reef restoration.



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a concessional capital role, and the nature of their permanence allows long-term planning in ecosystems for triple bottom line business development and financing. In MAR+Invest, the ideal scenario is establishing the technical assistance facility (see below) as an endowment to better deliver the proposed outcomes and generate a long-term blended model for coral conservation that can be replicated by other environmental trust funds.

The Mesoamerican Reef Technical Assistance Facility (MARTAF) is a new facility envisioned by the MAR Fund as a program to match a challenge grant made by the Oak Foundation for endowment funding. The objective is to direct the returns of the endowment to foster innovation and reef positive enterprise development in the MAR. This will result in a sustained flow of investment or debt ready enterprises that will attract private capital.

The MAR Emergency Fund is a financial mechanism to provide emergency support for coral restoration for reefs that have been impacted by natural or anthropogenic events. These can include hurricanes and storms, as well as ship groundings and damage by other human artifacts. The fund currently has a little over \$150,000. It will continue to grow annually through small increments from revenue generated by the endowment for the Reef Rescue Initiative²⁰, but external funding options are also being researched. The fund was deployed in October 2020 in response to the affected corals in three reef sites of the Puerto Morelos National Park in Quintana Roo, Mexico, following tropical storm Gamma and hurricane Delta. With the funds granted, emergency response brigades were able to provide immediate attention to reef restoration after the events hit the area. This prompt assistance resulted in 1,933 stabilized colonies, 4,216 fragments cemented to the reef, and 7,568 propped fragments. This mechanism may help to de-risk commercial investments in coral areas susceptible to hurricanes.

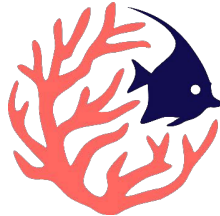
Addressing cross-cutting issues:

Gender equality and mainstreaming has been at the forefront of conservation and impact investing in the MAR. The representation of women in decision - making and the generation of opportunities for women is an essential part of work currently done by the partners of MAR+Invest, and this will be one of the pillars of the investment thesis and criteria. Eighty percent of the business opportunities in the prospect portfolio (Annex 1) will positively impact women through the generation of income opportunities, entrepreneurial support, financial products and better health.

One of the starting points of MAR+Invest to generate a network of coral entrepreneurs, is that out of 170 fellows in the MAR – Leadership program²¹, 70% are women. Equality in terms of access to finance is also a key issue that will be addressed by MAR+Invest; 50% of the prospect portfolio will target opportunities that serve a population that doesn't have access to finance in terms and conditions adjusted to their socio-economic context. New Ventures is a pioneer in Mexico in the generation of such products and in the creation of incentive schemes that reward better environmental practices.

²⁰ Reef Rescue Initiative is one of MAR Fund programs and endowment subaccounts. It is not the same Reef Rescue in MAR+Invest program architecture

²¹ The MAR Leadership Program is one of the partners of the MAR+Invest partnership.



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Climate Change Action is also a critical issue that MAR+Invest will be addressing. 50% of the opportunities in the portfolio have a climate change adaptation component. The environmental return of the adaptive actions will be reflected in the decrease of pressure on the reef.

Causal Chain:

MAR+Invest will develop reef positive businesses that **a.** support the protected areas in the MAR to become financially sustainable, **b.** support the communities living in and around protected areas to decrease the pressure on the reef, **c.** improve the livelihoods and climate resilience of coral – dependent communities while decreasing the pressure and threats on the MAR, and **d.** strengthen the emergency response to major shocks threatening the MAR. These businesses will capture equity investment and/or loans, closing the financial gap of private sector investment in the conservation of the MAR. The effect will be a net change from a reef negative to a reef positive scenario where the aggregation of fully developed and financed solutions will protect, conserve and restore the natural capital of the MAR while improving livelihoods.

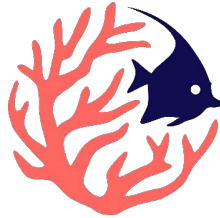
At the moment, it is not foreseen to implement percentage targets of total funds per country.

(See Annex 4. Figure 1. MAR+Invest: A pathway to change)

Timeline:

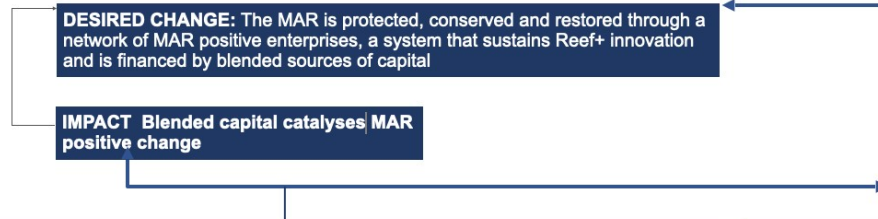
Design Phase (July – December 2021)

Timeline for MAR+Invest Design Phase	1	2	3	4	5	6
Development of Portfolio						
Feasibility analysis of prospect portfolio (Seaweed farming, Shrimp farms, CSA in Belize, Blue Carbon Quintana Roo, Marine Protected Areas in corporate partner model, Marine Park, waste water treatment in the region). Design of financial solutions	*	*	*			
Structure business opportunity of water plants and marine park	*	*	*	*		
Financial and legal analysis MAR+Invest (considers business opportunities with water park and sewage plants)				*	*	
Engagement of necessary stakeholders	*	*	*	*	*	
Identify and engage co-investors		*	*	*	*	
Identify and engage co-financers		*	*	*	*	
Establish environmental and socio – economic baseline for prospect portfolio		*	*	*	*	*
Structure MAR+Invest GFCR project	*	*	*	*	*	*
MAR+Invest Development						
Investment thesis (theory of change)			*	*		
Investment criteria			*	*		
Definition of metrics				*		
Definition of process and methodology for measurement					*	*
Alignment with global frameworks and SDG's					*	*
Institutionalization (MOU)					*	*

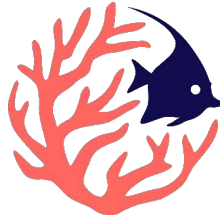


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MAR+ INVEST : THEORY OF CHANGE



OUTCOMES						SDG CO. BENEFITS	
OUTCOME 1: The protected areas of the MAR are financially sustainable. Communities living in Protected Areas are stewards of the natural capital		OUTCOME 2: Livelihoods of coral – reef dependent communities are MAR+ with increased resilience to climate change		OUTCOME 3: MAR Relief Fund effectively responds to major shocks		Coastal protection	
OUTPUTS : -MPAs acquire business partners and financing to transform into self financing – profit generating entities -MPAs acquire self financing capabilities and secure financing for transitioning towards financial sustainability -Protected Area resident communities are stewards of the territory -Green and blue finance products are available for protected area dependent activities -Increased number of women - owned businesses -MARTAF is operational and provides business development and advisory services to protected areas and communities.		OUTPUTS : -Improved conditions for climate resilient livelihoods -Strengthened adaptive capacity through reef+ income generation activities -MAR reduces its exposure to anthropogenic risks -Green and blue financial products available for reef+ businesses -Investment sequencing secured for business development and financing -Coral reefs thrive because damage caused by local threats is reduced -Increase in blended finance reduces local threats to MAR -MARTAF is operational and provides business development and advisory services to businesses reducing the pressure and eliminating threats on the MAR		OUTPUTS : -Emergency Fund is expanded in size and scope -Emergency Fund is partly financed by profit sharing mechanism with specific MAR+Invest portfolio solutions.		Increased food security	
REVENUE STREAMS : * Tourism user fees * Blue carbon credits * Payment for ecosystem services * Income generation activities for communities * Sale of Blue Carbon Credits * Returns from endowment (MARTAF)		REVENUE STREAMS : * Sales of ocean products from MAR+ aquaculture and ocean farming *Sales of climate smart agricultural and forestry products * Sales of Blue Carbon Credits * Payments for access to water and sewage *Returns from endowment (MARTAF)		REVENUE STREAMS : *Grants. Returns from endowment (Emergency Fund) *Parametric insurance *Emergency response grants		Sustainable aquaculture models	
						Biodiversity conservation	
						More economic opportunities	
						Increased tourism revenues	
						Empowerment of women	
						Increased fiscal revenues	
						Improved sanitation and access to water	
MITIGATED THREATS							
Nutrient loading	Pollution containing Pathogens	Ocean acidification	Rising ocean temperature	Storms, and hurricanes	Destructive fishing		
Discharges from agriculture	Unsustainable tourism	Unsustainable use of the MAR's natural capital	Coastal Development	*Plastic Pollution	Climate migration that occupies protected areas		



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5. What are the specific intervention(s) of the proposed Programme?

Intervention: MAR+Invest

MAR Fund, Healthy Reefs Initiative (HRI), New Ventures and the MAR-Leadership Program are partnering to create a Business Development and Financing Facility, that serves as a financial instrument to conserve, protect and restore the natural capital of the eco region while attracting private capital to the region.

MAR+Invest will combine philanthropic, commercial and development capital with regional expertise in **a.** financing conservation and innovation in the MAR, **b.** business acceleration and impact investing and **c.** monitoring and evaluation of coral reefs.

Structure and Partners:

1. MARTAF: Technical Assistance Facility for the MAR (Led by MAR Fund)
2. MAR Financing Solutions (Led by New Ventures)
3. Monitoring, Evaluation of Adaptive Management (Led by HRI)
4. Build and Connect - Capacity building and networks for MAR+ innovation (Led by the MAR Leadership Program)

1. MARTAF will identify and support the business development process -at any stage- of market-based solutions that deliver MAR+ outcomes. It will maximize impacts, accelerate the development process, and support with de-risking the commercial transaction that will grow the solution (escalation/replication). It will deliver through three main functions:

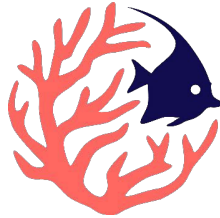
- a. Pre-investment (or pre-debt) support
- b. Post investment (or post-debt) support
- c. Learning & knowledge sharing

MARTAF's support will be through grants, business mentoring and advice for entrepreneurs, organizations advancing the solutions and co-financing partners. MARTAF will be responsible for the development and aggregation of the business opportunities for commercial capital. The facility will operate as a program of MAR Fund and a unit of MAR+Invest.

MARTAF's investment criteria, thesis and impact metrics, will be aligned with those of MAR+Invest, and its design and development will also be carried out in parallel with MAR+Invest.

2. MAR Financing Solutions will design and manage the financial products to be offered to the MAR+Invest portfolio. The products will be designed based on portfolio needs and the requirements of GFCR's investment window. This unit will operate as a program of New Ventures and -when feasible- will build upon its financing vehicles Viwala -fintech- and Adobe Capital -investment fund-.

Examples of the financial products that will need to be structured are loans for transitioning towards climate smart agriculture, loans for adopting super intensive technology for shrimp farming, loans for launching seaweed farming cooperatives, loans for developing sewage services, among others.



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3. Monitoring and evaluation: Established in the MAR since 2004, HRI presents the advantage of working with over 70 organizations in the region that have presence in some of the sites of the prospective portfolio. HRI will conduct the impact analysis for each venture in the portfolio using baseline data currently available, and assisting with additional parameters as needed in the fully developed impact monitoring plans

Due to the conservation nature of some of the prospects in the portfolio, they are already equipped with environmental impact assessments and impact evaluations that will support the initial baselines. Two of the projects are from the WWF portfolio and have been properly monitored to some degree. HRI will create report cards for the MAR+Invest portfolio.

HRI will take the same grounded yet innovative scientific approach to developing specific impact indicators and reference values for the GFCR indicators relevant for MAR+Invest, as it did for developing the world's first scientific indicator-based ecosystem health report card for a coral reef. This will include convening experts within the specific fields, with Dr. McField having direct experience co-authoring the WWF monitoring protocol for agrochemical contamination, organizing Belize's first seaweed cultivation training workshop – both in 2005 through the ICRAN project (with WWF); and now participating (through HRI) in the new Ocean Sewage Alliance – that seeks to advance funding and technological applications in this field.

4. Build and Connect, Capacity building and networks: the MAR Leadership Program is a community and incubator for learning, knowledge sharing, project design and implementation, and fostering synergies for the conservation leaders of today and tomorrow. Fellows, with their immense potential for professional growth and their commitment to a productive and resilient reef ecosystem, are the human capital “engines” driving conservation efforts across the MAR region. We believe that a strong regional network of local leaders, working across a variety of sectors, is vital to combatting the myriad of threats facing the Mesoamerican Reef and finding long-lasting solutions to its conservation and sustainable use. Build and Connect will build upon the experience of MAR-L and will extend its scope to regional investors and family offices in order to pursue financial innovation in philanthropy and regional mechanisms for the blue economy. Build and Connect is a response to the lack of business solutions emerging from the conservation sector and to the lack of an ecosystem to support market-based innovation. Closing these two gaps will be critical for the development of a strong blue economy that will protect, conserve and restore the MAR.

The following table shows the blended capital structure of MAR+Invest.



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Table 1. MAR+Invest: Blending Capital for the conservation of the MAR

MAR INVEST				
The Business Development and Financing Facility of the MAR				
CAPITAL STRUCTURE	CAPITAL D Business Development Capital		CAPITAL C Capitalization Capital	
SOURCES OF CAPITAL	Philanthropy Development Returns from endowment		Commercial Concessional	
USE OF CAPITAL	Ideation Enterprise Development De-risking growth		Enterprise financing	
MANGEMENT STRUCTURE	BUILD AND CONNECT	MARTAF	FINANCING SOLUTIONS	MONITORING AND EVALUATION

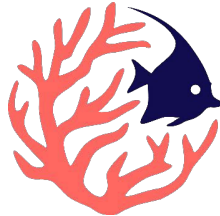
CAPITAL D: Refers to the capital to be used for ideation and business development, to be deployed by MARTAF and MAR Leadership Programme. The sources of financing are philanthropy, development assistance and returns from endowment. The ultimate goal is to secure strong business opportunities for commercial capital.

CAPITAL C: Refers to the capital needed by the ventures to finance growth and that comes from commercial or concessional sources. This capital will be deployed by New Ventures, other investment funds or directly from the GFCR and will cover the financing needs of the ventures along with the costs for monitoring and evaluation.

6. What are the expected results of the proposed Programme?

Expected results at the program level:

During the design stage targets for commercial and grant capital will be established



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- Catalytic Capital

Finance catalyzed into the MAR+ solutions (loans, grants, equity)

Commercial finance invested in MAR+ solutions (loans, equity)

Endowment returns invested in the MAR+ solutions (grants)

Finance catalyzed into MPA's

- Reef + Enterprise Development Reach

Number of reef+ companies developed (incubated / accelerated)

- Reef + Enterprise Financing

Number of reef+ enterprises financed

- Reef Resilience

Mitigated threats

Agriculture and Aquaculture

Area under sustainable practices

Reduction in chemical use and effluents discharged

Reduction in water consumption

Amount of GHG emissions avoided

Human caused pollution

Avoided pathogens in water

Climate change

Local reduction of acidification

Reduction of thermal stress

Regeneration of ecosystem functions

- Sustainability of Marine Protected Areas

Number of MPA's that have self-financing mechanisms

Number of communities with increased income

Expected results at the Portfolio Level (aligned to GFCR outcomes):

Outcome 1. Protected Areas:

- Protected Areas (in co-management)

Protected areas in the MAR reduce financial gaps

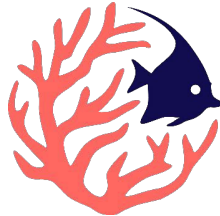
Protected areas in the MAR have new and expanded sources of revenue

Protected areas in the MAR establish business partnerships oriented towards financial sustainability

Protected areas with strengthened management, enforcement and monitoring systems

- Sustainable Protected Area Communities:

Communities living in/around protected areas improve levels of climate resilience (Better agricultural practices, develop contingency plans for major shocks)



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Creation, development and financing of new community-based enterprises
Job creation for communities living in protected areas
Promotion of women-led enterprises

Outcome 2. MAR Relief

- Ocean Farming: Seaweed farming
Regeneration of ecosystem functions
Local reduction of acidification
Increase in biodiversity
Reduction of thermal stress (to seafloor habitats)
Improved climate resilience
Sustainable livelihoods
- Aquaculture: Shrimp Farming in Belize
Reduced effluent discharge from aquaculture
Job creation
- Climate Smart Agriculture.
Reduced discharge from agriculture: (Reduced toxicity loads from pesticide and nutrient application)
Sustainable livelihoods
Increased climate resilience
- Blue Carbon
Conservation and restoration of mangroves
Maintains the value of ecosystem services (hectares of restored mangroves, avoided deforestation of mangroves)
Income generation in communities living in coastal areas
- Sewage
Reduction of pathogens
Water quality

Outcome 3. Reef Rescue

- Emergency Fund is expanded in scope to provide emergency response to de-risk the MAR+Invest portfolio
- Emergency Fund is partly financed by profit-sharing from specific MAR+Invest portfolio solutions

Sustainability of MAR+Invest:

MAR+Invest will be established as a long-term program, ideally looking to establish a dedicated endowment subaccount, but also raising program funds for business development and readiness for commercial financing.



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A second element of the sustainability of MAR+Invest is the development of a network of market - oriented innovators and the creation of a new ecosystem where innovation, entrepreneurship and investment will create change through new innovations and networks for enterprise growth and replication.

Alignment with SDG priorities in the region:

Goal 2. Honduras, Guatemala and Belize have targets and actions related to goal 2 that are also covered in the different national policies. Most of the countries have a food and nutrition security policy or program, which are aligned with the climate adaptation transitions pursued by MAR+Invest.

Goal 8. Mexico and Honduras are acting on goal 8 through actions related to financing support for small and medium - size enterprises. Quintana Roo presents specific actions oriented to the identification of opportunities and gaps to advance impact investing and social enterprises in the state, which are aligned with the MAR+Invest innovation and investment approach.

Although only Guatemala has Goal 9 as a priority goal, the other countries in MAR have concrete actions to foster innovation: The new Fisheries Act in Belize creates conditions to add value to the sector, access markets, develop new fisheries products and support entrepreneurship. Honduras, in the Sustainable Framework for Sustainable Consumption and Production, includes aspects as sustainable tourism, business innovation and promotion of green enterprises.

Goal 14 is a priority goal in the region with a number of actions in progress in the regulatory side oriented to protect natural resources, increase investments in technology and protected areas.

7. Describe the innovative nature of the Programme

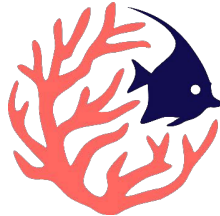
MAR+Invest and innovation:

1. Unlocking funding from Conservation Trust Funds (CTFs) to accelerate Reef+ outcomes via enterprise development and financing:

With 108 Conservation Trust Funds (CTFs) worldwide, at least US\$1.1 billion mobilized since 2009 to endowments and sinking fund accounts, US\$2 billion disbursed for conservation in the past ten years²²; and large portfolios with environmental impact; CTFs are a much-needed actor in the blended finance space.

MAR+Invest will be a proof of concept of **a.** the catalytic role that CTF's can have to mobilize capital and expertise to create new ecosystem for private players and accelerate environmental impacts, and **b.** the importance of CTF portfolios and networks in building the necessary additionality to close the financing gap of private capital in marine conservation.

²² Conservation Trust Funds 2020. Global Vision. Local Action. Conservation Finance Alliance 2020.



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2. Closing the divide between the ecosystems of socio-environmental entrepreneurship, impact investing and conservation (aggregation and additionally):

Impact investing has been successful in serving innovators and change makers. Investments in environmental solutions are part of most impact portfolios with some funds targeting specific sectors.²³ Part of the success is due to their abilities for **a.** creating incentives schemes to serve the necessary changes towards sustainable uses of natural capital, **b.** structuring mechanisms to serve populations and solutions that are too risky for traditional finance providers, and **c.** capturing diverse types of capital.

At the global level, there are examples of partnerships between conservation actors and large funds²⁴, but at the country and regional levels, these partnerships are the exception.

MAR+Invest aims to demonstrate that regional partnerships between these three ecosystems can capture diverse types of capital to develop and bring to market innovations that will reduce and eliminate the threats to coral reef ecosystems.

3. Integration with global and regional blended finance approaches to protect, conserve and restore natural capital:

MAR+Invest fits into regional strategies and global trends to accelerate conservation and restoration of natural capital via blended finance. It:

1. Presents a mechanism for Official Development Assistance in the region to channel resources towards green/blue finance, de-risking investments and climate action, which are three of the regional goals pursued by KfW, FFEM and USAID.
2. Aligns with the goals and needs of BIOFIN and the GEF SGP UNDP in the region.
3. Complements IDB's Natural Capital Facility and IUCN's Technical Assistance Facility for the Global Subnational Climate Fund.
4. Supports the local market approaches of the global conservation NGOs with presence in the region²⁵, and the ones from CTFs of the MAR countries.

8. Expected added value of partners and the GFCR

“While blended finance can help mobilize additional finance towards sustainable ocean economies in developing countries, not all blended finance is quality blended finance. Blended finance needs to be anchored to a development rationale, tailored to the local context and be monitored and evaluated for its development contribution”²⁶.

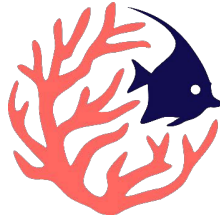
The Healthy Reefs for Healthy People Initiative -HRI- works with over 70 partner organizations to monitor, evaluate and improve the health of the MAR. HRI has the capacity to ensure that MAR+Invest has high quality cost-effective data to inform strategy and decision-making in the emerging field of investing in coral preservation. During the opening of the 2018 Year of Reef,

²³ Oceans, land degradation, carbon sequestration.

²⁴ Mostly led by one of the large conservation foundations.

²⁵ The prospect portfolio in this concept proposal has projects led by WWF, TNC, FMCN, UNDP and others.

²⁶ Reframing Financing and Investment for a Sustainable Ocean Economy. OECD 2020. Environmental Policy Paper No.22



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HRH The Prince of Wales even singled out HRI as one of two collaborative reef conservation initiatives that need augmenting to provide platforms for continued action.

MAR+Invest is part of a global effort to rescue coral reefs from extinction, a challenge that demands investment partners with local knowledge and global networks; exceptional capabilities to innovate, develop new products and co-create a new coral-oriented ecosystem within investment and sustainable development. New Ventures is the pioneer and leader in building the LAC ecosystem for impact investing. It has created innovative financial products that serve businesses in the missing middle and underserved markets and communities²⁷, manages two successful vehicles for investment and revenue-based loans, has advanced blended finance, and constantly generates solutions to challenge the status quo blocking the advancement of the SDGs.

Some of the recent innovations in New Ventures that are aligned with MAR+ Invest are:

- In partnership with WWF Mexico and GIZ²⁸, New Ventures is currently designing a financial mechanism for small farmers of agave, coffee and palm oil; that are adopting climate smart practices in the states of Oaxaca and Chiapas.
- In response to COVID-19, New Ventures designed and currently operates a multi-stakeholder blended finance emergency fund that provides loans with better financial conditions -if compared with traditional commercial finance- in exchange for meeting specific impact targets.

With a network of 127 innovators, the Leadership Program -MAR-L- is the largest network of change makers in the ecoregion. MAR-L develops the capacities and potential of conservationists in the region to design and implement high impact conservation projects. As part of MAR+Invest, the program will enable new cohorts for investment and market solutions that will increase the likelihood of sustained innovation and financing in the MAR.

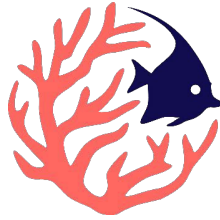
In 2017, MAR Fund identified the need to support and develop new financial approaches to conservation and restoration in the eco region. MAR+Invest is the result of an internal capacity building process, the generation of unorthodox partnerships for CTFs, the experimentation with business development grants and the acquisition of new capabilities to move towards development and financial additionality and portfolio aggregation.

GFCR is a platform that is more than a channel for accessing diverse types of capital, it represents the possibility to create and share coral-saving knowledge, innovation and networks, at an accelerated pace. The GFCR offers seed capital to test and improve a multi stakeholder coral-saving model approach that no other mechanism currently offers. GFCR's design grant is an exception²⁹ that enables MAR+Invest to fully understand the market, assess the potential portfolio and its needs, study legal frameworks, explore additional sources of capital and partnerships and most of all, to generate a working relationship among partners in order to establish strategic, operational and management mechanisms to launch MAR+Invest.

²⁷ LGBT, women, small farmers

²⁸ <https://www.giz.de/en/html/index.html>

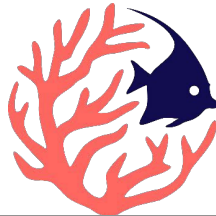
²⁹ In the past 4 years, Convergence hasn't open design windows for natural capital or ocean solutions in LAC or with global scope.



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9. Leadership and implementation of the Programme

Organization	Role in MAR+Invest
MAR Fund	Identify and develop innovations through strategic advice and development grants. Secure readiness for debt or equity investment
	Identify and pursue new sources of funding and strategic regional alliances to further develop MAR+Invest
	Develop MARTAF to secure long term financial resources to sustain innovation and business development of the MAR+ Invest portfolio
	Co-produce financial and impact reporting in the terms and frameworks dictated by the GFCR
New Ventures	Management of commercial capital. Design and manage appropriate financing solutions for MAR+Invest portfolio. When necessary, New Ventures will be the aggregating entity (small-scale farmers in Belize, seaweed cooperatives)
	Identify and pursue new sources of funding and strategic regional alliances to further develop MAR+Invest
	Support business development of portfolio
	Generate financial and impact reporting in the terms and frameworks dictated by the GFCR
HRI	Monitoring and evaluation for MAR+Invest. (Design of output and impact indicators for portfolio)
	Co-produce impact reports (environmental)
MAR-L	Launch and manage new cohorts and networks of market-oriented innovators
	Launch and manage a new program to engage Central American and Mexican investors to support MAR+Invest
	Co-produce impact reporting in the terms and frameworks dictated by the GFCR



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<p>Portfolio development partners</p>	<p>All of the portfolio prospects are working with conservation NGOs, are co-developed by a development actor in the region or are strategic for local governments and regional financial institutions. Some of these actors, such as WWF, TNC, GEF SGP-UNDP have expressed an interest in co-financing and joining in further project development. Others, like IDB, CABEL, regional and national governments, must be engaged during the design stage.</p>
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10. Expected period of implementation

Design Phase (6 months)

Month 3:

Prospect Portfolio for initial phase has been assessed
Financing solutions are identified and designed

Month 4:

Business opportunities are structured
Legal feasibilities are completed

Month 5:

Co-investors and co-developers of projects are identified and engaged
Investment Policy Frameworks for MAR+Invest and MARTAF are completed
Investment thesis
Investment criteria
Impact metrics
Process and methodology for measurement
Alignment with global frameworks and SDGs

Month 6:

Environmental and socio-economic baseline for projects is established based on available data
MAR+Invest - GFCR project is structured

The following are goals of the design phase for MAR+Invest:

Financial:

To integrate a portfolio for the period 2022-2032, that has the capacity to absorb \$30M in commercial capital and \$10M in concessional capital and grants for business development offered by the GFCR.

To identify additional investors.

To engage partners to co finance business development.

Portfolio:

To assess the prospective portfolio.

To identify and design financing solutions for the prospective portfolio.



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To map the status of sewage services in Belize and to identify opportunities for MAR+Invest.
To identify other business opportunities with plastic pollution, sewage, blue carbon, fisheries and MPAs.

MAR+Invest and MARTAF Development:

To institutionalize the partnership among MAR Fund, New Ventures, Healthy Reefs Initiative and the MAR Leadership Program.

To establish the impact policies for MAR+Invest and MARTAF.

11. Cost, co-financing and leverage potential of the Programme

During the design phase, MAR+Invest will establish use of funds, costs of development, co-funding and co-investing for the period 2022–2032.

12. Country conservation ambition

Regional conservation ambition:

The Tulum Agreement (1997) marks the beginning of a regional effort that resulted in a myriad of policies and actions that individually and collectively have been oriented to the protection and sustainable use of the MAR. Despite these high-level political efforts, the MAR lacks site-based enforcement and deeper national and regional regulatory requirements needed to protect it.

1. Funding and partnerships for the conservation, restoration, and sustainable use of the MAR:

The establishment of MAR Fund (2004) was a catalyzer to drive development and philanthropic capital to the region with the objective of supporting local communities and organizations driving innovation and bottom-up MAR+ solutions.

2. Creation and management of protected areas:

The MAR region now boasts a network of more than 70 coastal and marine protected areas, and almost all of them are now under active management. The countries have protected territorial seas within multiple use marine protected areas. Fifty seven percent of the territorial sea in the MAR is now within protected areas, although only 3.3% is fully protected from fishing. The declaration of *The Mexican Caribbean Biosphere* (2016), protecting close to 1,900 species of flora and fauna, 500 species of fish and 86 species of coral, is the most ambitious action from a regional actor in recent years.

3. Protection of spawning aggregations and critical species:

The region has become a global leader in adaptive management and the implementation of recommended management actions, mechanisms that actively involve local participation. “Fishers are at the forefront of designating and enforcing fish replenishment zones, in several cases participating in their design, management and monitoring. A region-wide ban on shark finning has been implemented, and no-take protected areas acting as fish refuges are being created to recover ecosystems and commercial fisheries.”³⁰. “In Belize, spawning aggregations

³⁰ Mesoamerican Reef: A Vision of the future. 2016. MAR Fund. FMCN, HRI. <https://www.marfund.org/wp-content/uploads/2016/12/Mesoamerican-Reef-2017-A-vision-for-the-Future-Summary.pdf>



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are protected; reef-associated herbivorous fish are protected in Guatemala, Belize, Mexico and the Bay Islands of Honduras. As a result, a promising trend is observed with recovery of parrotfish and other herbivorous fish. These species are effective at grazing and keeping macro algae in check, and important for overall coral growth and health.

4. Fisheries management, sustainability and participation:

Belize has a progressive spatially based managed access policy where fishing licenses are granted based on area use; the policy creates fishing committees with responsibility for determining eligibility for fishing licenses, monitoring and enforcement. In 2010 Belize became one of the first countries in the world to ban all forms of trawling.

In Honduras responsible fishing and aquaculture areas may be zoned exclusively for artisanal fishing; joint artisanal and industrial fisheries management plans may help protect artisanal fisheries; preferential rights to resources given to indigenous peoples and ethnic communities. Mexico and Guatemala also recognize the principle of Sustainability in management. The regulation includes concessions and permits for coastal fishing communities. Mexico declares fishing sanctuaries in coordination with local small-scale fisher groups and the law gives preferential use rights to indigenous people and local communities.

The creation of no take zones is regulated in Mexico, Belize and Honduras by resource management frameworks.

5. Offshore oil production:

Offshore oil exploration and production is explicitly banned in Mexico and Belize.

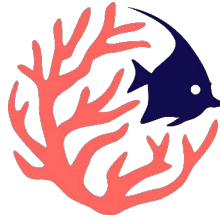
6. Marine Pollution:

Advances have been made on the marine pollution front as well, demonstrating that agricultural production can be carried out with substantially reduced fertilizer, pesticide and sediment run off into the MAR. Over the past decade, the World Wildlife Fund has deployed precision agriculture techniques with the agricultural sector with encouraging results. For example, between 2004 and 2016, the Belize Sugar Cane Farmers Association reduced phosphorus applications by 82%; the Banana Growers Association reduced fungicides by 24%, and a palm oil company in Honduras reduced herbicides by 70% and fertilizer by 30% while increasing productivity by 25%.

7. Payment for Ecosystem Services -PES-:

Mexico is a global example of large-scale Payment for Ecosystem Services regulations that enables community and commercial engagement. In Guatemala, the earliest forestry incentives - a form of PES- benefited larger landowners and functioned as subsidies for both extractive forest production and ecosystem services. Smallholders and indigenous groups campaigned for a PES program to meet their needs, leading to the creation of a second program that focuses on improving rural development, along with ecosystem services.

8. Co-Management of MPA: Belize, Guatemala and Honduras have co-management regulations in place for protected areas. Belize, in addition, has a progressive protected area regulation that enables private investment.



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9. Emerging policy innovations: The creation of the Blue Economy Ministry in Belize (2020) is the latest step in the region towards protection and promotion of the reef economy.

10. Actions from the Civil Society: The conservation sector in the region has promoted The Mesoamerican Legal Strategy Group that brings together a regional coalition of environmental legal advocates working to harmonize no-take zones and ensure they are effectively enforced and managed. The group has been instrumental in several cases to avoid changes in land use and to protect coastal communities and sanctuaries.

What is exceptional about these advances is that they are taking place across the four MAR countries and stakeholders across the region are communicating and exchanging better practices. Formal and informal networks are being created and are growing. The fact that these changes are occurring at the regional level is a crucial accomplishment as it reflects the ecological reality that the MAR is a single, shared, resource.

13. Risk assessment

1. Policy and regulation:

Policies and frameworks are positive for enterprise development. Mexico presents challenges as co- management of protected areas is not regulated, but it compensates with a strong PES program.

2. Risk of voluntary markets:

Blue Carbon presents risks associated with the voluntary nature of the market and the lack of standards. The rules to allow these ecosystems to claim credits are new. In 2015, Verra³¹ published its first methodology to give credits to tidal wetland and seagrass restoration, but only in September 2020 Verra expanded its rules to cover wetland conservation. MARInvest+ will support Blue Carbon projects in the identification of partners with a track record of placing credits in voluntary markets. It is important to notice that several blue carbon projects are in execution and that an ecosystem of organizations is working into the development of this market.

3. Climate Risk:

Effects of climate change impact natural capital and extreme weather events affect assets: For each venture in the portfolio, MAR+Invest will have assessments of climate risks, safeguards and contingency plans. MAR+Invest aims to negotiate guarantees with development partners in order to cover climate risks and others associated with the financial products to be offered. One of the objectives of the design phase is to find a profit-sharing mechanism with a potential venture in the

³¹ www.verra.org



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portfolio in order to increase funding for The Emergency Fund, a subaccount of MAR Fund created to address major shocks.

4. Economic impact of COVID 19:

Users suspended payments and the debt of organizations providing access to water and sewage increased significantly

The feasibility studies of the projects to develop networks of water treatment in Honduras and Belize, will be updated based on post COVID realities. Based on the new findings, a participatory process will be completed with communities and water boards in order to establish new solutions (this evaluation will be completed during the design phase).

Decrease in sales and increased debt of shrimp farms in Belize: A new assessment will be developed and mitigation strategies will be put in place. Studies to be completed during the design phase.

5. Financial Risk:

New Ventures is not a recognized player in financial markets or in the blended finance space:

New Ventures has a solid financial position and an excellent track record with investors. Established the first impact fund in Latin America -Adobe Capital- with a recent round of US\$ 30 M. A member of CAPRIA Network, Adobe is recognized as an innovator and leader in emerging markets.

The financial risk is outweighed by the capacity that New Ventures has to understand the local markets and innovate with products, partnerships and ecosystem creation, in order to serve segments that larger players don't find attractive, or that find too risky and expensive to serve.

6. Capital loss:

The region is very risky and projects have a high climate risk:

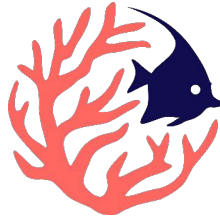
MAR+Invest aims to secure an ODA guarantee and/or first loss capital. The ODA guarantee is aligned with the strategies of the KfW and USAID for the region.

14. SDG targets on which the progress will be accelerated:

Goal 2. End Hunger, achieve food security and improved nutrition and promote sustainable agriculture. (SDG 2 target to be addressed: 2.4).

The Initial MAR+Invest portfolio includes two projects targeted at transitioning towards climate smart sugar cane and shrimp farmers aquaculture towards sustainable practices. Climate smart agriculture and aquaculture which reduce harmful effluents from being released into coastal ecosystems addresses a key threat to the Mesoamerican Reef. (MAR).

Goal 6. Ensure availability and sustainable management of water and sanitation for all (SDG 6 targets to be addressed: 6.3, 6.b).



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A major threat to the MAR is the lack of adequate sewage treatment facilities which results in the release of untreated sewage which threatens not only coral reef but also human health, i.e., due to untreated pathogens. MAR+Invest seeks to address this by unlocking development and government resources for the construction, optimization and operationalization of sewage treatment plants.

Plastic pollution is also among the targets that MAR+Invest aims to address. During the design phase, potential solutions will be analyzed.

Goal 8. Promote Sustained Inclusive and sustainable development economic growth, full and productive employment and decent work for all (SDG 8 targets to be addressed: 8.4, 8.9)

MAR+Invest focuses on the generation of MAR positive businesses, some of which are social businesses run by vulnerable communities and/or women living in protected areas and coastal zones. Promotion of entrepreneurship and enterprise creation is central in the Protected Areas and Reef Relief programs of MAR+Invest.

Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation. (SDG 9 target to be addressed: 9.3).

A key success factor for MAR+Invest will be the ability to generate financial products to serve small farmers, vulnerable communities and women developing Reef+ activities who have limited access to other financial resources.

Goal 12. Ensure sustainable consumption and production patterns. (SDG 12 target to be addressed: 12. B: Develop and implement tools to monitor sustainable tourism).

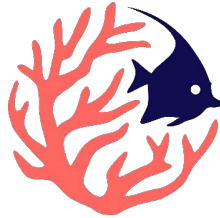
Monitoring and evaluation of impact is central to MAR+Invest. Monitoring and evaluating the impact of sustainable tourism that sustains jobs and promotes local culture and products is critical for the Protected Areas program of MAR+Invest.

Goal 13. Take urgent action to combat climate change and its impacts. (SDG 13 targets to be addressed: 13.1, 13.3, 13.a)

MAR+Invest is a mechanism designed to attract diverse types of capital for coral positive solutions in the MAR ecoregion, including adaptation and mitigation impacts, which may be through associated ecosystems, such as mangrove and sea grass.

In the initial portfolio, solutions in Climate Smart Agriculture, Blue Carbon (conservation and restoration of mangroves) and Ocean Farming (seaweed, king crab, sea cucumber) have direct mitigation and adaptation outputs while strengthening resilience, adaptive capacity, education and awareness on climate change mitigation, adaptation and impact reduction.

Goal 14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development. (SDG 14 targets to be addressed: 14.1, 14.2, 14.3, 14.7, 14.b).



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MAR+Invest aims to promote the blue economy with a focus on MAR+ innovation that will positively impact all ecosystems and communities dependent on the MAR. Blue economy promotion takes on innovation and business development, but also in the attraction of capital to the region.

Goal 17. Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development. (SDG 17 targets to be addressed: 17.1, 17.3, 17.6, 17.11, 17.16, 17.17).

MAR+Invest is a partnership of local and international leaders in the fields of conservation, science and impact investing. Their goal is to mobilize diverse types of capital towards conservation, restoration and sustainable use of the natural resources of the MAR.

Through financing partners (New Ventures, GFCR, BNP Paribas) and portfolio development partners (WWF, TNC, Blue Finance, Polos Water Board, GEF SGP-UNDP) MAR+Invest advances partnerships for SDG progress in the MAR region.

15. Relevant GFCR outcomes and outputs:

MAR+Invest focuses on outcomes 1, 2 and 4 of GFCR. The design of the program architecture is based on GFCR outcomes:

1. Protected Areas (GFCR Outcome 1): Pursues the financial sustainability of Marine Protected Areas and the communities that live in and around them.
2. MAR Relief (Outcome 2): Aims to reduce the pressure on the natural capital of the MAR acting upon the local threats to the MAR.
3. Reef Rescue (Outcome 4): Aims to strengthen emergency response to major shocks.

The Protected Areas program is aligned with the following GFCR outputs:

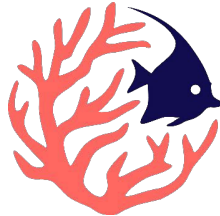
- a. Well managed MPAs
- b. Entrepreneurial MPAs
- c. Higher income for local communities

The MAR Relief program is aligned with the following GFCR outputs:

- a. Sustainable fisheries and aquaculture
- b. Reef-first businesses
- c. Higher income for local communities
- d. Pollution management systems (water treatment plants and sewage)

The MAR Rescue program is aligned with the following GFCR outputs:

- a. Mechanisms for rapid financial support
- b. Crisis plans



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16. Relevant Objectives from national and regional strategic documents:

At the regional level, in acknowledgement of the importance and connectivity of the Mesoamerican Reef region, the heads of state of Mexico, Belize, Guatemala and Honduras signed the Tulum Agreement in June 1997 with the objective of promoting the conservation of the ecoregion through its sustainable use, thereby contributing to the wellbeing of present and future generations.

The Central American Commission for Environment and Development (CCAD) was established with the mission of developing a regional regime for environmental cooperation and integration that contributes to improving the quality of life of the populations of its Member States. Its actions have responded to the Environmental Plans of the Central American Region (PARCA). The first was adopted in 1999 for the period 2000-2004, and was aimed at operationalizing the Central American Alliance for Sustainable Development (ALIDES) and beginning the consolidation of CCAD as a whole. PARCA II covered the period 2005-2009 and proposed an approach focused on the development of instruments for environmental management and the establishment of regional cross-sector alliances. PARCA III 2010-2014, focused on environmental governance. The Council of Ministers then formulated the Regional Environmental Strategy for 2015-2020. The Regional Environmental Framework Strategy 2021-2025 -to be published soon- includes five strategies. Strategy 2 is specifically about seas and biodiversity, and incorporates strategic actions focused on the promotion of economic activities based on adequate management of biodiversity and environmental services. In addition, Strategy 1 is about transitioning to sustainable production and consumer patterns within a regional plan for the circular economy; Strategy 4 is about improving governance and the investment climate for forest ecosystems, including mangroves, articulating adaptation and mitigation to climate change with protection, sustainable and cultural management of forests and restoration, and Strategy 5 targets reduction of social, ecological and economic vulnerability to climate change through actions that increase resilience, adaptability, capacities and the transition to low carbon economies. All these strategies are aligned with MAR+Invest.

At the regional level, the last project approved by the GEF to support Mexico, Belize, Honduras and Guatemala for protection of the MAR, is the MAR2R project oriented to enhance regional collaboration for the ecological integrity of the Mesoamerican Reef and scale up the ridge to reef approach to its management. The Central American Commission on Environment and Development (CCAD), the regional body appointed by the Central American Integration Secretariat to coordinate and facilitate environmental efforts, currently leads the execution of the project, which will finalize in 2023.

Belize:

The National Adaptation Strategy to Address Climate Change in the Agriculture Sector of Belize (2015). Established the following objectives (updated policy has not been published):

1. Changes in pests and diseases: To incorporate the “use of appropriate indigenous or, if necessary, imported Biological Control Agents (BCA) for the most expedient, cost effective and environmentally sustainable option for management of crop pests and disease vectors. Improved biodiversity for the agro-ecological balance needed for economic sustainability of agriculture



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production systems”. Both actions are part of the Climate Smart Agriculture approach that promotes agro - ecology and the use of environmentally sustainable control agents.

2. Aquaculture adaptation measures: An objective of the law is “to improve brood stock (resistance to disease and tolerance to environmental change i.e., control of temperature and salinity -Reduced energy cost including the use of renewable and / alternative sources of energy i.e., solar, wind, etc. - Research (resistant varieties, improved management systems; improved shrimp growing techniques)”. The transition towards super-intensive technology responds to this objective.

3. Group resilience: The law recognizes that the people factor is always the most important element for successful implementation. Suggestion is made to achieve the effective engagement of the primary stakeholders, the farming community, and to promote group resiliency for responding to the challenges of Climate Change. This element is aligned with the focus on small farmers of the sugar cane project.

4. Monitoring and documentation: The principle of “continuous monitoring and documentation of responses to the meteorological, agro-ecological and environmental changes experienced over time”, is aligned with the focus on monitoring and evaluation of coral ecosystems in MAR+Invest.

Mangrove protection legislation (2018): Recognizes the importance of mangroves and their economic value and established new regulations and enforcement mechanisms for management and conservation of mangroves. This regulation supports future Blue Carbon projects in Belize³²

Belize Entrepreneurship Strategy (2014):__Since 2014, the country established an entrepreneurship strategy. Among the share goals with MAR+ Invest are:

- 1.To diversified the financial services offer
- 2.To strengthened the incubation and acceleration system and to created the National Entrepreneurial Network.

Guatemala:

Guatemala is highly affected by climate change. Disaster management is the center of the National Climate Change Policy and has also been the concentration of the work of the Official Development Assistance to the country.

The national policy for the development of the Guatemalan System of Protected Areas (SIGAP) is defined as “The description of the set of principles, objectives, legal and institutional frameworks with the objective of guaranteeing the provision of goods and environmental services and the conservation of biological diversity for the social and economic well-being.” The law provides a strong regulatory framework to develop sustainable tourism projects in Protected Areas.

The Policy for the Comprehensive Management of the coastal and marine zones of Guatemala (2009) provides the coastal marine ecosystems and their hydrographic basins with regulatory

³² WWF and the Smithsonian Institution are doing a national assessment of Blue Carbon in mangrove in sea grass in Belize. They are engaging with private landowners with mangrove on their lands.



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frameworks to guarantee their permanence and the equitable development of the population, especially in the coastal areas. Both of these frameworks, combined with the National Policy on Climate Change (Governmental Agreement 329-2009) and the Adaptation Plan to Climate Change for the Caribbean region of Guatemala (2012), strengthen the management of the marine-coastal resources to reduce threats related to unsustainable fishing practices and coastal development, supporting the conservation of biodiversity and improving the livelihoods of the populations in the region.

Honduras.

MAR+Invest is aligned with the country's Climate Change Law, the National Strategy on Climate Change and the Master Plan of Water, Forest and Soils.

The Master Plan for Water, Forest and Soils (2016) integrated the county's mitigation and adaptation strategies, including the National REDD+ Strategy (NRS). The plan provides a strong foundation for REDD+, which translated into the creation of a Forest Carbon Facility with support from development assistance and actors from the civil society. The Master Plan offers a favorable regulatory environment for blue carbon projects in Honduras.

The Climate Change Law also established a program for environmental services, and ecosystem restoration that is designed to increase competitiveness in environmental services through ecosystem rehabilitation and is currently working on the creation of a regulatory framework for PES. This law will be beneficial for any business oriented towards restoration and conservation of coral ecosystems.

The "Local Water Boards" are established and regulated by the Water and Sewage Law (2003) as legal entities that can manage the water and sewage services. The regulation establishes that civil society organizations, that represent 51% of the municipality, can be the service providers. This regulation allows for social enterprises to be created in order to serve underserved communities and the environment. The model studied by MAR+Invest "Polos Water Board" is a successful example in the island of Roatán.

The Law of Support for Micro and Small Enterprises that entered into force in 2018 promotes the formalization of small and micro enterprises and provides benefits for their operation. Seaweed farming has potential to be replicated in Honduras and Blue Carbon also offers opportunities to be studied. A favorable environment in the country for entrepreneurship will facilitate the legal and operational aspects to be developed.

Mexico.

1. The National Strategy for the implementation of the 2030 Agenda states that the ocean and coastal areas are an essential part of the sustainable development model for the country. The strategy promotes the protection and restoration of marine ecosystems, including reefs and mangroves, in order to increase climate change adaptation, and the promotion of integrated coastal zone management plans. The Strategy also states that investments in enforcement need to be improved and that funding will be allocated for new technologies. The spirit of the law aligns with the objectives and potential portfolio of MAR+Invest in Quintana Roo that will consider Blue Carbon, eco-tech, fisheries and sustainable tourism ventures.



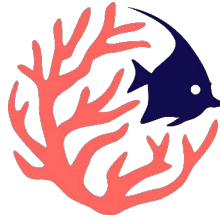
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2. The National Strategy for Climate Change recognizes the importance of coastal ecosystem protection and restoration to increase their resiliency for mitigation and adaptation. This recognition, along with the progressive framework of Payment for Ecosystem Services in Mexico, creates very positive conditions for Blue Carbon and other conservation and restoration market – based approaches.

3. The Plan for Sustainable Tourism of Quintana Roo recognizes the high value of coral reefs for the state's economic health but also as a climate change mitigation tool. It realizes that the tourism sector can be a strong ally to safeguard integrated coastal zone management and marine resources conservation. The Sustainable Tourism Plan provides a positive framework for business development in sustainable tourism, a sector that is growing in areas of the state that are intact.

4. The government of Mexico has commissioned the Ministry of Foreign Affairs to implement the recommendations of the High-Level Panel on a Sustainable Ocean Economy³³. The Ministry is working with many partners in the country and one of their objectives, among others, is the

³³ <https://oceanpanel.org/>



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OVERVIEW OF FUNDING REQUESTED

Leverage potential: During the design phase MAR+Invest will assess the leverage potential of the prospect portfolio and will also approach potential co-investors.

From the prospect portfolio, the marine park and the water treatment plants will require project finance to be developed in close collaboration with regional actors and local governments.

Ventures with potential to attract commercial capital to the MAR in the first 3 years of operation:
(See annex 3 for details)

Seaweed farming: \$8M

Marine park: TBC

Belize Shrimp industry: \$10M

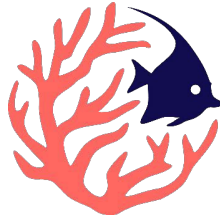
Water treatment plants: TBC

Marine Protected Areas: \$3.5 (Based on preliminary projection of Blue Finance)

Climate Smart Agriculture: \$5 M

Total: 26.5

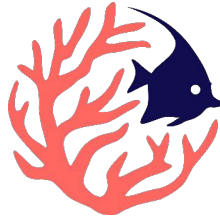
Category	Amount Requested (Million US\$)	Description
Baseline Studies	1	Impact assessment, monitoring and evaluation.
Development of Business Opportunities	6	Development of projects for commercial capital readiness. Research and development of projects at very early stage.
Program Development	3	MAR+Invest development, management operation, impact monitoring and reporting. Legal studies, market studies, project finance when needed, ecosystem building, structure of business opportunities, fundraising for additional commercial capital. Management of commercial capital.
Capital for loans (prospect portfolio)	26.5	Commercial Window
TOTAL GRANT	10	
TOTAL COMMERCIAL	26.5	
Expected Programme leverage ratio of grants to investment capital	TBC	



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SELF-ASSESSMENT

Eligibility criteria	Yes/No
The proposal reflects a holistic approach to mitigating various drivers of coral reef degradation	Yes
The proposal is based on a blended finance approach, with the goal of creating an enabling environment for private sector engagement and/or developing revenue streams to sustainable finance coral reef conservation and reef-first businesses	Yes
The proposed results are aligned with national SDG priorities	Yes
The proposed Programme will be endorsed by the government and include key national stakeholders	Yes
The proposal is based on country consultations, as explained in the Concept note, and efforts have been or will be made to secure Programme government endorsement of the full proposal (the Letter of Endorsement)	Yes
<p>The proposal is based on the standard template for Concept Notes, it is complete, and it includes:</p> <ul style="list-style-type: none"> - Theory of Change demonstrating contribution to GFCR Outcomes - Results-oriented partnerships - Environmental and socio-economic baseline data is available and/or there is a strategy in place to collect this data - Results are measurable and a clear plan exists for monitoring and evaluation - Blended solutions (transactions) and substantive outcome-level results, and - Initial risk assessment and mitigation measures. 	Yes
The proposal is expected to leverage resources for the SDGs at scale	Yes



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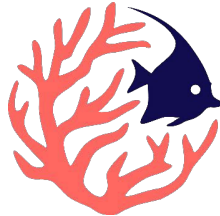
ANNEX 1: TECHNICAL REVIEW CRITERIA FOR CONCEPT NOTES

Category	Criteria	Weight in category	Weight of total
1. Mandatory criteria	1.1 Submission is appropriate, complete and follows guidelines outlined in the call for proposal	Pass/Fail	
	1.2 Feasible timeframe (2-8 years) with quantitative milestones on a semi-annual basis	Pass/Fail	
	1.3a Clearly delineated impact metrics positively affecting coral reefs and associated ecosystems and coastal and reef-dependent communities (e.g., x hectares protected, x% increase in fish density, x% increase in biodiversity, alternative incomes for xx fishers, coastal protection for xx households, etc.)	Pass/Fail	
	1.3b Drivers negatively affecting coral reefs and associated ecosystems identified and clear actions to mitigate (e.g. overfishing: impose a no-take zone, agricultural runoff: introduce upstream regulation and enforcement)	Pass/Fail	
	1.3c Monitoring plan adequately described tied to delivering proposed impact metrics and appropriately resourced	Pass/Fail	
	1.5 Co-investment from local sponsors (can be in the form of funding or in-kind/staff time)	Pass/Fail	
	1.6a Revenue generation schemes are included	Pass/Fail	
	1.6b Already revenue generating	Pass/Fail	
	1.6c If Point 1.6b is 'Fail' then does the proposal include a clear, feasible route to market and eventually secure financial sustainability?	Pass/Fail	
	1.7 Clear budget with overhead/management accounting for no more than 18% (breakdown by outcome and output)	Pass/Fail	
1.8 Targeted grant to investment leverage ratio is 1:3 or above.	Pass/Fail		
2. Relevance	2.1 Relevance of approach according to GFRC vision and the SDGs (drivers addressed and use of blended finance mechanisms)	X/10	75%



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	2.2 Theory of Change and rationale for the proposal is clear with potential for scaling-up and replication	XX/10	
	2.4 Conservation and biodiversity outcomes are project priorities with multiple drivers of degradation addressed and tied to milestones appropriately timed and measured (clearly stated; % increase in live coral cover, reduction of invasive species, increase in fish density, hectares protected, reduction in pollution, etc.)	XX/20	
	2.5 Blue finance mechanisms are viable and include appropriate timeline to implementation (business models using blue bonds, debt, guarantees to attract investment, etc.)	XX/20	
	2.6 Scale of positive impact for coastal and reef dependent communities. (i.e. number of benefactors and type)	X/10	
	2.8 Project aims to address issues of gender and social inclusion with clear metrics, timelines, and delivery routes (e.g. more economic opportunities for women)	X/5	
3. Delivery and operations	3.1 Roles and responsibilities (clarity and appropriateness of governing and policy frameworks) with local employment favoured and gender balanced	X/5	25%
	3.2 Capacities or convening agent and partners (technical capacities and/or abilities), readiness of actors involved, baseline metrics, capacity for monitoring and reporting impacts	X/5	
	3.3 Duration and milestones (clarity and appropriateness of), with risks and mitigating factors delineated	X/5	
	3.4 Budget adequacy (cost-efficiency and appropriateness)	X/5	
	3.5 Stage of development—is the concept past the idea stage, demonstrated by financing secured, signed partnership agreements, signed contracts with the community or government, IP produced, or other contractual evidence	X/5	



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ANNEX 2: ADDITIONAL BASELINE DATA

1. MAR Report Cards

The Mesoamerican Reef is one of the most well-studied and reported coral reef areas of the world, with over 14 years of ‘baseline’ scientific information on the health of the reef at over 300 sites, available for this project.

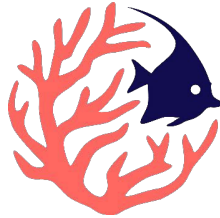
The biennial “Report Cards” grade the health of the Mesoamerican Reef based on survey data collected using a standardized protocol (www.agrra.org) after formal training of data collectors (from local partner organizations). Report Cards were created in 2008, 2010, 2012, 2015, 2018, 2020, available at www.healthyreefs.org. They will continue biennially with 2022, 2024, etc.

The monumental effort is convened through the Healthy Reefs for Healthy People Initiative, initiated in 2005, and now a multi-national collaboration of over 75 organizations, using standardized monitoring protocols, openly sharing available data and creating innovative communications involving high level exposure and messaging in national media outlets.

The Report Cards measure the ultimate impact indicator – whether or not all of the collective conservation and management efforts are actually resulting in healthier reefs over time. Reef Health is evaluated in an index consisting on the following four key indicators and grading criteria, equally weighted into a mean.

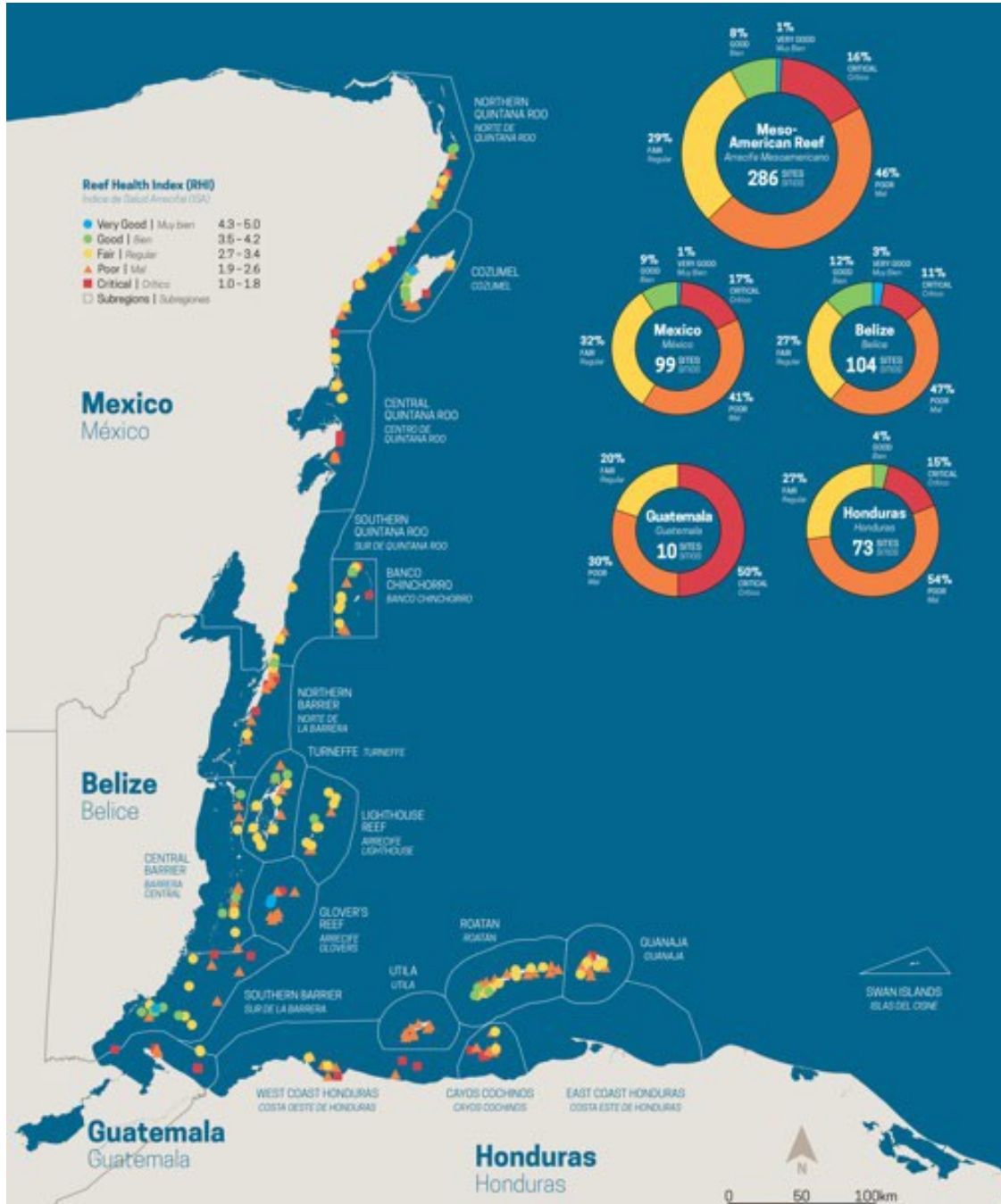
Threshold Values for Indicators Valores de los Indicadores				
(ASSIGNED THE HIGHEST RANK MEETING THESE MINIMUM VALUES) (SE ASIGNA EL RANGO MÁS ALTO QUE CORRESPONDE A ESTOS VALORES MÍNIMOS)				
Grade Rango	Coral Cover Cobertura de Coral	Fleshy Macroalgae Cover Cobertura de Macroalgas Carnosas	Herbivorous Fish Biomass Biomasa de Peces Herbívoros	Commercial Fish Biomass Biomasa de Peces Comerciales
Very Good Muy Bien	40%	1%	3,290	1,620
Good Bien	20%	5%	2,740	1,210
Fair Regular	10%	12%	1,860	800
Poor Mal	5%	25%	990	390
Critical Crítico	<5%	>25%	<990	<390

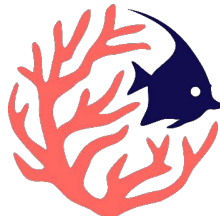
Most of the Mesoamerican Reef is within the second lowest heat stress regions of the Caribbean, and consistent monitoring of bleaching events has yet to record widespread significant (>30%)



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bleaching mortality – as experienced in many other major coral reef regions. The following map from the 2020 Report Card shows the resulting Reef Health Index at over 286 sites. The majority of sites (46%) are in poor condition, followed by 29% in fair condition. The good and very good sites are largely within Marine Protected Areas.





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The overall health of the Mesoamerican Reef had been improving over the first decade of monitoring, although our last assessment marked its first decline in health – indicating an urgent need to accelerate the conservation efforts and engage a wider set of actors in the active management and conservation actions – primarily the private sector.

Reef Health Index over time



Reef Resiliency and Health are essentially founded on the same indicators, but the resiliency after any disturbance depends on the precise nature of that impact. For current climate impacts the affects of coral bleaching have been the most pronounced indicator, along with hurricane damages. This recent paper by Muniz et al (2019) compared 30 years of heat stress across the Caribbean and found most of the Mesoamerican Reef to be within the second least affected ‘heat stress region’. This result is supported by a over a decade of monitoring the major bleaching events, without recording significant bleaching related coral mortality (>30%) on a wide scale.

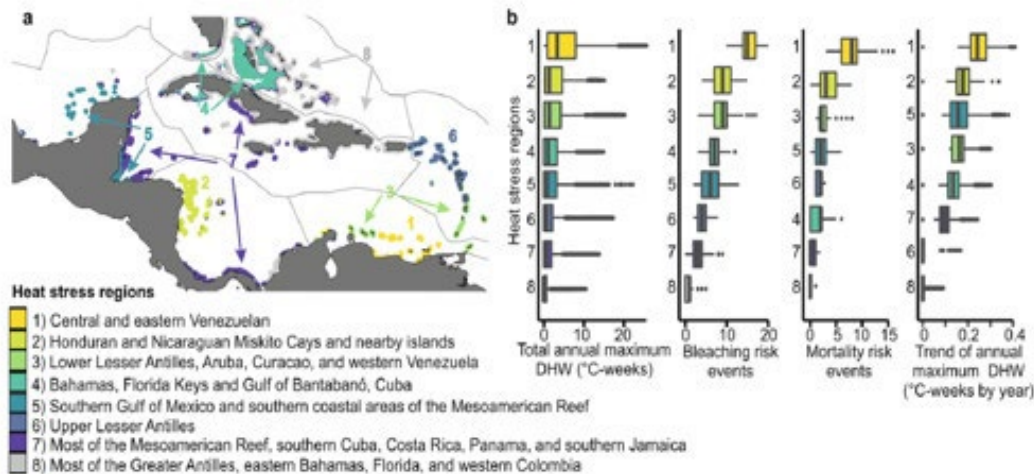
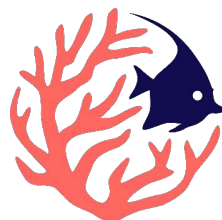


Figure 3. Heat-stress regions and their maximum annual DHW during 1985–2017. (a) Reef locations within heat-stress regions 1–8 (clusters) outlined by ecoregions. (b) Total annual maximum Degree Heating Weeks (DHW), bleaching and mortality risk events and trends of annual maximum DHW. (c) Heat-stress regions 1–8 showing distribution of annual maxima, interquartile range and median are represented with white box, outliers



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are represented with black points. The pink shadow represents the limit of mortality risk (≥ 8 °C-weeks). Map was created using QGIS version 3.2.0 (<https://www.qgis.org/en/site/>)⁷³.

from: Scientific Reports | (2019) 9:11013 | <https://doi.org/10.1038/s41598-019-47307-0>

2. MAR Eco Audits

The Mesoamerican Eco-Audit evaluates collective efforts toward protecting and sustainably managing the region's coral reefs, celebrates management success stories, and documents the extent to which recommended management actions have been implemented in Belize, Guatemala, Honduras and México. The Healthy Reefs Initiative (HRI), in collaboration with the World Resources Institute (WRI) and local partners, developed this unprecedented multinational evaluation tool of reef stewardship in 2011. The Eco-Audit is a systematic and transparent evaluation of the degree of implementation of 28 recommended reef management actions, grouped into seven general themes: Marine Protected Areas, Ecosystem-based Fisheries Management, Coastal Zone Management, Sanitation and Sewage Treatment, Research, Education and Awareness, Sustainability in the Private Sector, and Global Issues. In 2021 HRI launched the fourth Eco-Audit, enabling consideration of trends and rates of implementation in addition to the comparative scores for implementation by each country.

3. MPA Studies in progress.

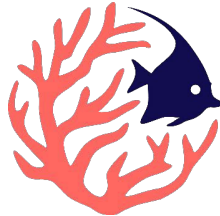
WWF in collaboration with MAR Fund, NOAA and with support of the German Government via the International Climate Initiative (IKI) is undertaking a resilience assessment of targeted marine protected areas (MPAs) within Belize, Honduras and Mexico. This initiative is analyzing anthropogenic and natural threats to the targeted MPAs as well as assessing their resilience potential, and identifying potential adaptation options to help enhance resilience potential of the MPA systems. It will provide critical information to manage risks and guidance for climate-smart management of the MPAs. The analysis is in the final stage of completion, with findings to be available in late May/early June 2021.

The initiative includes analyzing a matrix of ecological, physical, socio-economic and adaptive capacity indicators to better understand the resilience potential of the targeted MPAs.

Indicators being analyzed within the matrix (together) include:

1. Ecology of reef systems within MPAs to understand community cover/density, species redundancy, and spatial heterogeneity.
2. In-situ and satellite sea surface temperatures to understand exposure of reefs.
3. Threats such as land-based sources.
4. Socio-economic impact to understand communities and stakeholders' livelihood ties, conservation investment in the MPAs, and subsidies for effective conservation/management.
5. Adaptive capacity of the MPAs to determine resilience potential.

4. Extension on the threats. Marine pollution in the Caribbean



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Incomplete sewage treatment and poor solid waste management are pervasive sources of marine pollution in the region. These sources are projected to increase as populations, coastal cities, and tourism continues to grow. Eighty percent of marine pollution results from direct or indirect discharge of solids and liquids from land-based sources such as rivers, outfalls, waterways, agricultural runoff, and infrastructure. The rest enters the oceans through petroleum exploration and production, shipping, discarded fishing gear, and the atmosphere. It is distributed throughout the entire MAR – concentrated in the main tourist / urban areas.³⁴

The United Nations have stated that 80% of the wastewater resulting from human activities doesn't receive appropriate water treatment, ending in the rivers and oceans of the world without previously eliminating harmful pollutants for our own health and the environment.

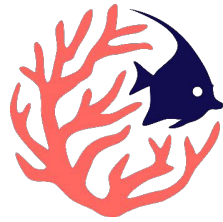
In 2012, the biologist Serguei Damián Rico Ensenaro, from the UNAM's Reef Coral Sclero-Chronology Laboratory, managed to measure the presence of the isotope $\delta^{15}\text{N}$ (Delta Nitrogen 15) in the coral of the *Orbicella faveolata* species, and establish it as a wastewater indicator in the Arrecifes de Puerto Morelos National Park in the last 40 years. The result: an exponential increase in $\delta^{15}\text{N}$ between 1970 and 2012, reflecting the increase in black (untreated) water in the coral territory. This increase coincides with the growth in the number of hotel rooms near the coral reef, from 400 to 8,000, approximately, as documented by Rico Ensenaro as a master's thesis.³⁵

Run-off from agricultural non-point sources, including fertilizers and pesticides, is a significant concern throughout in the MAR, particularly in the south (Honduras, Guatemala and Southern Belize, where higher rainfall and sloped terrain leads to increased runoff. More industrialized agriculture practices tend to use significantly higher levels of fertilizer per hectare of cultivated land than traditional uses, but these can be altered with conservation-based interventions and partnerships. Most rivers discharge significant sediment loads, straining biodiversity and shallow coastal waters. Sediment loads from the Mesoamerican region (Mexico, Belize, Guatemala and Honduras) contribute significant amounts of sediment to the WCR—374 million tons per year. Land-based activities including agriculture, forestry and urbanization contribute further to sedimentation and erosion.

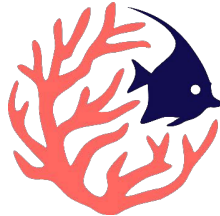
All of these threats provide nutrient pollution which fuels fleshy macroalgal growth, and in the case of sewage, pathogens as well.

³⁴ Diez, S.M., Patil, P.G., Morton, J., Rodriguez, D.J., Vanzella, A., Robin, D.V., Maes, T., Corbin, C. (2019). Marine Pollution in the Caribbean: Not a Minute to Waste. Washington, D.C.: World Bank Group.

³⁵ <https://bit.ly/3oeoshY>



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ANNEX 3: BUSINESS MODELS AND FINANCIAL INSTRUMENTS

MAR+Invest - PROSPECT PORTFOLIO (Initial phase)

MAR+ INVEST
PROGRAM ARCHITECTURE

PROTECTED AREAS	MAR RELIEF	REEF RESCUE
Sustainable Protected Areas	Aquaculture	Emergency Response
Sustainable Protected Areas Communities	Ocean Farming	
Sustainable Tourism	Fisheries	
	Climate Smart Agriculture	
	Blue Carbon	
	Sewage, Sanitation, Access to Water	
	Sustainable Tourism	

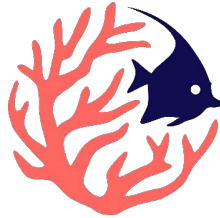
Below are prospect portfolio initiatives for protected areas and MAR relief with preliminary information, to be assessed during the design phase.

I. PROTECTED AREAS

Corporate Partner Model – Blue Finance (pilot in progress with a local NGO in Belize)

- Commercial in Belize: \$1,5M blended finance investment: anchor investor Mirova Althelia –soft committed
- Commercial in Honduras: \$1M (GFCR + other co-financing such as MAR+Invest)
- Commercial in Quintana Roo: \$1M (GFCR +other co-financing such as MAR+Invest)
- Grant: MAR Fund allocated small grant for Blue Finance’s feasibility study of pilot site in Belize (2020)

MPA Sustainable Communities



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- Business Development for GEF SGP – UNDP projects (Belize, Honduras and Mexico)
- Commercial and grant: Undetermined. Projects in diverse stages of development. Require feasibility.
- Co-financing: GEF SGP –UNDP, portfolio assessment in progress, co-financing in discussion and amounts cannot be determined as yet.
- The current MAR Fund portfolio of projects with communities in Marine Protected areas also needs further analysis in order to establish development and commercial capital needs. MAR Fund currently supports -with grants- a number of ecotourism initiatives advanced by communities and by NGOs, managing protected areas or with presence in protected areas, in the region.

II. MAR RELIEF

Transitioning the shrimp industry in Belize towards Reef + practices

- Commercial: \$10M
- Product: Loans
- Grant: undetermined
- Co-financing grants: WWF, IDB, MAR2R – CCAD project³⁶ (Co-financing partners to be determined and percentage distribution to be determined)
- Duration: 3 – 6 yrs

Climate Smart Agriculture - small sugar cane farmers in Belize

- Commercial: \$3M – \$5M
- Product: Loans
- Grants: To determine in design phase
- Co-financing: in discussion with WWF
- Duration: 3 – 10 yrs

Seaweed Regenerative Ocean Farming (Belize, Honduras and Guatemala)

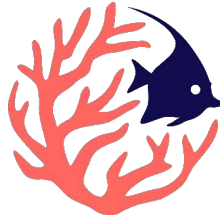
- Commercial: \$6M - \$8M
- Product: Loans
- Grants: \$2M
- Co-financing in discussion with The Nature Conservancy
- Years: 6 – 8 yrs

Blue Carbon in Quintana Roo

- Commercial: TBC (Validation of feasibility study is required)
- Grants: \$500,000
- Co-financing grants (to be determined)
- Years: 10 yrs

Other reef positive aquaculture projects in research and development are ocean farming of sea cucumber and Caribbean king crab. Assessment will be done in design phase.

³⁶ Integrated Ridge to Reef Management of the Mesoamerican Reef Ecoregion Project financed by GEF (MAR2R / CCAD / WWF)



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Network of water treatment plants in Honduras (construction, optimization & operationalization)

- Feasibility studies completed by IDB in 2015.
- During design phase need to structure project for operationalization of 2 plants (Guanaja and Utila) and optimization of 3 plants (West End, Coxen Hole, Los Maestros)
- During the design phase need to assess construction of plans in Tela, Trujillo and La Ceiba
- Years: 3- 7 yrs

Water treatment plants in Belize

- Assessment of business opportunities will be done in design phase.
- Capital needs and project finance to be assessed in design phase

I. REEF RESCUE

Underwater dive parks: Artificial Modular Reef Technology

- Assessment of business opportunity, project finance and impacts will be done in design phase.
- If project is feasible, a business model of profit sharing with MAR+Invest will be design in order to create a revenue stream for the Emergency Fund (Managed by MAR Fund)

CAPITAL NEEDS – Initial Portfolio

Feasibility, structure of products and project finance (water plans) must be done in design phase. The following table is based on available data and consultations with project owners and other stakeholders.

VENTURE	BUSINESS DEVELOPMENT GRANTS	COMMERCIAL	Co Financing
Protected Areas – Corporate Partner	\$180,000	\$3.5M	TBD
Protected Areas - Communities	TBC	TBC	TBD
Shrimp Industry Transition	TBD	\$10M	TBD
Climate Smart Agriculture	TBD	\$5M	TBD
Seaweed Regenerative Ocean Farming	\$2M	\$8M	TBD



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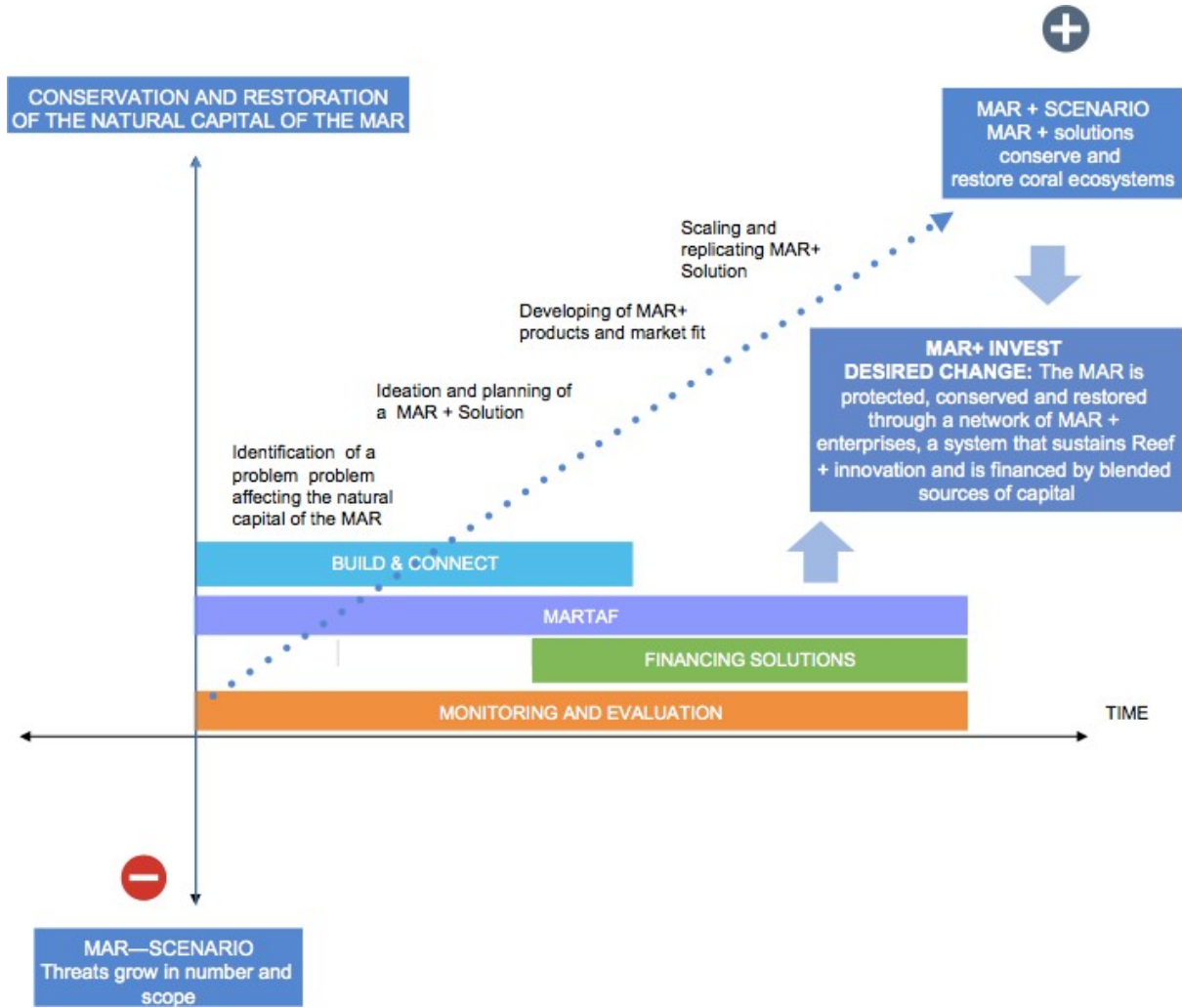
Blue Carbon Quintana Roo	\$500,000	TBD	TBD
Sewage plants	TBD	TBD	TBD
Marine Park	TBD	TBD	TBD
TOTAL	\$2,680.000	\$26,5M	TBD

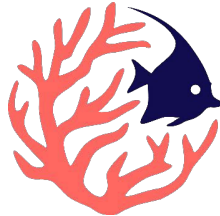


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ANNEX 4: CAUSAL CHAIN.

Fig. 1. A pathway to change





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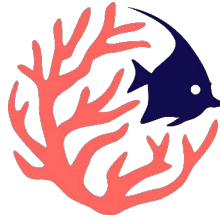
ANNEX 5: BUDGET BY UNDG CATEGORIES

UNDG Category	USD
1. Staff and other personnel	8,700
2. Supplies, Commodities, Materials	-
3. Equipment, Vehicles, and Furniture (including Depreciation)	-
4. Contractual services	48,700
5. Travel	-
6. Transfers and Grants to Counterparts	36,050
7. General Operating and other Direct Costs	-
Total Direct Costs	93,450
8. Indirect Support Costs (Max. 7%)	6,542
TOTAL Budget	99,992

ANNEX 6: PROJECT ADMINISTRATIVE ARRANGEMENT FOR RECIPIENT ORGANIZATIONS

On behalf of the Recipient Organizations, and in accordance with the UNDG-approved “Protocol on the Administrative Agent for Multi Donor Trust Funds and Joint Programmes, and One UN funds” (2008), the MPTF Office as the AA of the GFCR will:

- Disburse funds to each of the Recipient Organizations in accordance with instructions from the GFCR Global Team. The AA will normally make each disbursement within three (3) to five (5) business days after having received instructions from the GFCR Global Team along with the relevant Submission form and Project document signed by all participants concerned;
- Consolidate the financial statements (Annual and Final), based on submissions provided to the AA by Recipient Organizations and provide the GFCR annual consolidated progress reports to the donors and the GFCR Global Team;
- Proceed with the operational and financial closure of the project in the MPTF Office system once the completion is completed by the Recipient Organizations. A project will be considered as operationally closed upon submission of a joint final narrative report. In order for the MPTF Office to financially close a project, each RO must refund unspent balance of over 250 USD, indirect cost (GMS) should not exceed 7% and submission of a certified final financial statement by the recipient organizations’ headquarters);
- Disburse funds to any RO for any costs extension that the GFCR Global Team may decide in accordance with the GFCR rules & regulations.



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Accountability, transparency and reporting of the Recipient Organization:

Each Recipient Organization will establish a separate ledger account under its financial regulations and rules for the receipt and administration of the funds disbursed to it by the Administrative Agent from the Fund Account. That separate ledger account will be administered by each Recipient Organization in accordance with its own regulations, rules, policies and procedures, including those relating to interest

The Recipient Organization will assume full programmatic and financial accountability for the funds disbursed to them by the Administrative Agent. Such funds will be administered by each recipient in accordance with its own regulations, rules, directives and procedures.

The Recipient Organization will have full responsibility for ensuring that the Activity is implemented in accordance with the signed Project Document;

In the event of a financial review, audit or evaluation recommended by the Executive Board, the cost of such activity should be included in the project budget;

Ensure compliance with the Financing Agreement and relevant applicable clauses in the Fund MOU.

Reporting:

Each Receipt Organisation will provide the Administrative Agent and the Fund Secretariat (for narrative reports only) with:

Type of report	Due when	Submitted by
Bi-annual project progress report	15 June	Convening Agent on behalf of all implementing or recipient organizations and in consultation with/ quality assurance by the GFCR Global Team, where they exist
End of project report covering entire project duration	Within three months from the operational project closure (it can be submitted instead of an annual report if timing coincides)	Convening Agent on behalf of all implementing or recipient organizations and in consultation with/ quality assurance by the GFCR Global Team, where they exist



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Annual progress report, which may contain a request for additional GFCR allocation if the context requires it	15 December	Convening Agent on behalf of all implementing or recipient organizations and in consultation with/ quality assurance by the GFCR Global Team
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For the preparatory grant financing, the full programme document will be considered as the annual reports. The GFCR Global team may request a summary of the preparatory activities.

Financial Reports and timeline

The financial reporting requirements for the below follow the 8 UNDG budget categories.

Timeline	Event
28 February	Annual reporting – Report Q4 expenses (Jan. to Dec. of previous year)
30 April	Report Q1 expenses (January to March)
31 July	Report Q2 expenses (March to June)
31 October	Report Q3 expenses (January to September)
<i>Certified final financial report to be provided at the quarter following the project financial closure</i>	

Unspent Balance exceeding USD 250 at the closure of the project would have to be refunded and a notification sent to the Administrative Agent, no later than three months (31 March) of the year following the completion of the activities.

Ownership of Equipment, Supplies and Other Property

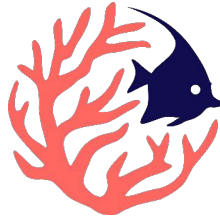
Matters relating to the transfer of ownership by the Recipient Organization will be determined in accordance with applicable policies and procedures defined by the Fund.

Public Disclosure

The Fund Secretariat and Administrative Agent will ensure that operations of the GFCR are publicly disclosed on the GFCR website (<https://globalfundcoralreefs.org>) and the Administrative Agent website (<http://www.mptf.undp.org>)

Final Project Audit for recipient organization projects (Not Applicable to Preparatory Grant)

An independent project audit will be requested by the end of the project (For multi-year projects the GFCR Executive Board might request add. audit reports). The audit report needs to be attached to the final narrative project report. The cost of such activity must be included in the project budget.



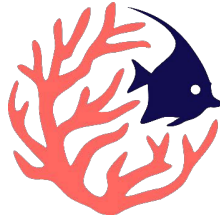
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Special Provisions regarding Financing of Terrorism

Consistent with UN Security Council Resolutions relating to terrorism, including UN Security Council Resolution 1373 (2001) and 1267 (1999) and related resolutions, the Participants are firmly committed to the international fight against terrorism, and in particular, against the financing of terrorism. Similarly, all Recipient Organizations recognize their obligation to comply with any applicable sanctions imposed by the UN Security Council. Each of the Recipient Organizations will use all reasonable efforts to ensure that the funds transferred to it in accordance with this agreement are not used to provide support or assistance to individuals or entities associated with terrorism as designated by any UN Security Council sanctions regime. If, during the term of this agreement, a Recipient Organization determines that there are credible allegations that funds transferred to it in accordance with this agreement have been used to provide support or assistance to individuals or entities associated with terrorism as designated by any UN Security Council sanctions regime it will as soon as it becomes aware of it inform the head of Fund Secretariat, the Administrative Agent and the donor(s) and, in consultation with the donors as appropriate, determine an appropriate response.

ANNEX 3: PROVISIONS RELATED TO THE PREVENTION OF AND RESPONSE TO SEXUAL HARASSMENT (SH) AND SEXUAL EXPLOITATION AND ABUSE (SEA) INVOLVING IMPLEMENTING PARTNERS (IPS)

1. The Implementing Partner acknowledges and agrees that UNDP will not tolerate sexual harassment and sexual exploitation and abuse of anyone by the Implementing Partner, and each of its responsible parties, their respective sub-recipients and other entities involved in Project implementation, either as contractors or subcontractors and their personnel, and any individuals performing services for them under the Project Document.
 - a. In the implementation of the activities under this Project Document, **the Implementing Partner, and each of its sub-parties referred to above, shall comply with the standards of conduct set forth in the Secretary General's Bulletin ST/SGB/2003/13 of 9 October 2003, concerning "Special measures for protection from sexual exploitation and sexual abuse" ("SEA").**
 - b. Moreover, and without limitation to the application of other regulations, rules, policies and procedures bearing upon the performance of the activities under this Project Document, in the implementation of activities, **the Implementing Partner, and each of its sub-parties referred to above, shall not engage in any form of sexual harassment ("SH").** SH is defined as any unwelcome conduct of a sexual nature that might reasonably be expected or be perceived to cause offense or humiliation, when such conduct interferes with work, is made a condition of employment or creates an intimidating, hostile or offensive work environment.
2. A) In the performance of the activities under this Project Document, the Implementing Partner shall (with respect to its own activities), and shall require from its sub-parties (with respect to their activities) that they, **have minimum standards and procedures in place, or a plan to develop and/or improve such standards and procedures in order to be able to take effective preventive and investigative action.** These should include: policies on sexual harassment and



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sexual exploitation and abuse; policies on whistleblowing/protection against retaliation; and complaints, disciplinary and investigative mechanisms. In line with this, the Implementing Partner will and will require that such sub-parties will take all appropriate measures to:

- i. Prevent its employees, agents or any other persons engaged to perform any services under this Project Document, from engaging in SH or SEA;
 - ii. Offer employees and associated personnel training on prevention and response to SH and SEA, **where the Implementing Partner and its sub-parties have not put in place its own training regarding the prevention of SH and SEA, the Implementing Partner and its sub-parties may use the training material available at UNDP;**
 - iii. Report and monitor allegations of SH and SEA of which the Implementing Partner and its sub-parties have been informed or have otherwise become aware, and status thereof;
 - iv. Refer victims/survivors of SH and SEA to safe and confidential victim assistance; and
 - v. Promptly and confidentially record and investigate any allegations credible enough to warrant an investigation of SH or SEA. The Implementing Partner shall advise UNDP of any such allegations received and investigations being conducted by itself or any of its sub-parties referred to in with respect to their activities under the Project Document, and shall keep UNDP informed during the investigation by it or any of such sub-parties, to the extent that such notification (i) does not jeopardize the conduct of the investigation, including but not limited to the safety or security of persons, and/or (ii) is not in contravention of any laws applicable to it. Following the investigation, the Implementing Partner shall advise UNDP of any actions taken by it or any of the other entities further to the investigation.
2. B) The Implementing Partner shall establish that it has complied with the foregoing, to the satisfaction of UNDP, when requested by UNDP or any party acting on its behalf to provide such confirmation. Failure of the Implementing Partner, and each of its sub-parties, to comply of the foregoing, as determined by UNDP, shall be considered grounds for suspension or termination of the Project.