



Belize Marine Fund

2nd Biennial Conference



Fragments of Hope

**PROCEEDINGS OF THE
BELIZE MARINE FUND 2nd BIENNIAL CONFERENCE**

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2nd BIENNIAL CONFERENCE

Virtual Sessions

Belize City

May 10th – 11th, 2022

ACRONYMS

BAS	Belize Audubon Society
BFD	Belize Fisheries Department
BMF	Belize Marine Fund
BTB	Belize Tourism Board
BTIA	Belize Tourism Industry Association
BV	Blue Ventures
CZMAI	Coastal Zone Management Authority and Institute
EDF	Environmental Defense Fund
FoH	Fragments of Hope
HRI	Healthy Reefs Initiative
MAR	Mesoamerican Reef
MARFUND	Mesoamerican Reef Fund
MBECA	Ministry of Blue Economy and Civil Aviation
MCAAP	Marine Conservation and Climate Adaptation Project
MPA	Marine Protected Area
NCRMN	National Coral Reef Monitoring Network
PACT	Protected Areas Conservation Trust
PFP	Project Finance for Permanence
SACD	Sarteneja Alliance for Conservation and Development
SCTLD	Stony Coral Tissue Loss Disease
SEA	Southern Environment Association
TASA	Turneffe Atoll Sustainability Association
TNC	The Nature Conservancy
TIDE	Toledo institute for Development and Environment
UB-ERI	University of Belize - Environmental Research Institute
WCS	Wildlife Conservation Society

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Acknowledgments go to:

Thank you to the marine conservation organizations and people who participated in the 2nd Belize Marine Fund Biennial Conference, both as presenters and as the audience, to discuss key topics of marine conservation and marine protected area management - and to share knowledge and expertise in these areas. We also thank the OAK Foundation and the MAR Fund, for their support of the Conference, and Island Innovation LLC for their excellent hosting of the virtual space in which the conference took place.



EXECUTIVE SUMMARY

The primary objective of the Belize Marine Fund (BMF) is to *provide long-term financial sustainability for addressing high-priority marine resources management and conservation issues in Belize for greater impact throughout the Mesoamerican Reef Eco-region*. The first Belize Marine Fund Biennial Conference was held on October 7th, 2019, to share the successes of the BMF's partners as well as the experiences and lessons learned.

The 2nd Biennial Conference was held on the 10th-11th October, 2022, and was designed to share the successes of the BMF and its implementing partners in addressing the thematic areas outlined in the BMF Strategic Plan (2019 – 2021). These thematic areas include investments in strengthening the resilience of Belize's marine protected areas network, restoring Belize's fish stocks. It also showcased research designed to inform management action, improving awareness of Belize's reef both nationally and internationally, and financial sustainability solutions for supporting effective marine protected area management. This second Conference was held in a very different COVID-19-impacted world, using a virtual platform, and looked at investments since the launch of the BMF Strategic Investment Plan.

BMF has been supporting important initiatives in Belize in five key thematic areas. The Conference was attended by more than a hundred participants from more than forty organizations across eight countries, including NGO and civil society partners, funding agencies, and government representatives. It provided a platform for raising the profile of the BMF and its partners, as well as a forum for sharing experiences and lessons learned, while showcasing outputs and outcomes that have been achieved to date in the first three Thematic areas:

- Theme 1:** Results on the Ground: Solutions for Enhanced MPA Management and Marine Resources Conservation
- Theme 2:** Fisheries for the Future: Enhanced Fisheries Management for Sustained Ecosystems and Biodiversity
- Theme 3:** Research for Management Action: Informing Decision-Making in Marine Resources Management

On the second day, the Conference focused on presentation on the remaining two thematic areas:

- Theme 4:** Effective Marketing of Belize's Reef at National and International Levels
- Theme 5:** Innovation in Sustainable Financing and the Blue Economy: Linking National and Regional

A sixth session focused on the implementation of the BMF Investment Plan and the level of impact it has had in contributing towards both BMF's objectives and national goals and targets.

This document provides an overview of the conference, with summaries of the presentations while capturing the discussions on pressing issues affecting marine resources management in Belize. The report also highlights synergies and learning, and the successes that can be achieved through collaboration between BMF and its partners – both grantees and other funding agencies, to achieve positive conservation outcomes and impacts.



BELIZE MARINE FUND 2nd BIENNIAL CONFERENCE

Virtual Sessions, Belize City

10th May, 2022

AGENDA – Day 1

- 9:00 Introduction** **Zoe Walker**
Moderator
- 9:05 Welcome Note** **Maria Jose Gonzalez**
Executive Director, MAR Fund
- 9:10 Opening Remarks** **Kennedy Carrillo**
Chief Executive Officer,
Ministry of Blue Economy and Civil Aviation
- 9:20 Opening Remarks** **Dr Kenrick Williams**
Chief Executive Officer,
Ministry of Sustainable Development, Climate Change
and Disaster Risk Management
- 9:30 Theme 1: Results on the Ground: Solutions for Enhanced MPA Management and Marine Resources Conservation**
- Resilience Analysis of Belize’s Protected Areas System to Climate Change.
Nadia Bood, Senior Program Officer, World Wildlife Fund
 - Expanding Belize's Network of Marine Protected Areas.
Ralna Lewis, Assistant Country Director, Wildlife Conservation Society
 - Contributing to Resilient Fisheries by Strengthening Managed Access Committees.
Nicanor Requena, Project Manager, Environmental Defense Fund
- 10:00 Question and Answer Session**

10:25 Theme 2: Fisheries for the Future: Enhanced Fisheries Management for Sustained Ecosystems and Biodiversity

- Rebuilding Abundance
Janelle Chanona, Vice President, Oceana in Belize

- Building Capacity for Effective Lionfish Management in Belize's Fish Replenishment Zones
Fabian Kyne, Conservation Science Manager, Blue Ventures

- Building Knowledge of Fish Spawning Aggregations at Cayman Crown Through Monitoring and Protection
Cecilia Guerrero, Project Manager, Toledo Institute for Development and Environment

10:55 Question and Answer Session

11:15 Coffee Break

11:20 Theme 3: Research for Management Action: Informing Decision-Making in Marine Resources Management

- Ongoing Reef Replenishment in Southern Belize with an Emphasis on Mapping and Quantifying Natural and Replenished Acroporid Cover
Lisa Carne, Founder/Director, Fragments of Hope

- Rewilding Belize's reefs through marine protected areas: the case study of Turneffe Atoll
Dr Rachel Graham, Founder and Executive Director, MarAlliance

- Efforts to Safeguard Belize's Endangered Antillean Manatees
Jamal Galves, Belize Manatee Conservation Program Coordinator, Clearwater Marine Aquarium Research Institute

12:00 Question and Answer Session

12:02 Close of Day 1



BELIZE MARINE FUND 2nd BIENNIAL CONFERENCE

Virtual Sessions, Belize City

11th May, 2022

AGENDA - Day 2

- 9:00 Introduction** **Zoe Walker**
Moderator
- 9:05 Welcome and Overview of Day 1** **Nayari Diaz-Perez**
Executive Director, PACT
- 9:15 Theme 4: Effective Marketing of Belize’s Reef at National and International Levels**
- Creating the Next Generation of Conservation Leaders: Reef Protectors.
Dareece Chuc, Environmental Education and Communications Director,
Belize Audubon Society
 - The Importance of Belize’s Marine Resources to Our Tourism Product Linette
Canto, Executive Director, Belize Tourism Industry Association
 - Branding for Change—Enhancing National and International Awareness of the
Belize Barrier Reef Reserve System – World Heritage Site.
Nadia Bood, Senior Program Officer, World Wildlife Fund
- 9:45 Question and Answer Session**
- 10:00 Break**

10:10 Theme 5: Innovation in Sustainable Financing and the Blue Economy: Linking National and Regional

- Developing Belize's Blue Economy Policy and Strategy
Maxine Monsanto, Director, Ministry of Blue Economy and Civil Aviation

- Investing in a Resilient Coastal Economy: Project Finance for Permanence for Belize
Osmany Salas, World Wildlife Fund, Belize Project Finance for Permanence (PFP)

- Game Changing Finance Solutions...Finding a Way to Making MPAs Work
Valdemar Andrade, Executive Director, Turneffe Atoll Sustainability Association

- Blue Economy Regional Protocol: An Opportunity to Enhance Regional, National and Local Coordination to Improve a Healthy Environment and Livelihoods in the MAR
Carlos Rodriguez, Marine coastal specialist and safeguards of the MAR2R project

10:50 Question and Answer Session

11:15 Coffee Break

11:20 Theme 6: BMF Investments: Measuring Impact

- Belize Marine Fund (BMF) Investments: Measuring Impact
Angeline Valentine, Project Officer, MAR Fund/BMF

11:30 Conference Wrap UP

Zoe Walker
Moderator

11:35 Closing Remarks

Janet Gibson
BMF Steering Committee Chairperson

11:40 Conference Ends

PROCEEDINGS OF THE
BELIZE MARINE FUND 2nd BIENNIAL CONFERENCE
10th – 11th May, 2022

DAY ONE

WELCOME ADDRESS

Maria Jose Gonzalez

Executive Director

MAR Fund



Good morning, Chief Executive Officer of the Ministry of Blue Economy and Civil Aviation - Kennedy Carrillo, Chief Executive Officer of the Ministry of Sustainable Development, Climate Change and Disaster Risk Management - Dr Kenrick Williams; Director of the Blue Bond and Project Finance Permanence Unit of the Ministry of Finance – Ms. Beverly Wade; Executive Director of the Protected Areas Conservation Trust - Nayari Diaz-Perez; representatives of government ministries and organizations, donor partner agencies, the Belize Marine Fund Steering Committee members, MAR Fund Board Members, grantee partners, and friends.

A warm welcome to all to the second Biennial Conference of the Belize Marine Fund. Thank you very much for joining us. I want to begin by thanking the OAK Foundation for its generous support to the Belize Marine Fund, through which we have been able to co-finance many important initiatives in Belize. We will hear about some of these initiatives and their results in these two mornings. We have grouped the presentations for these two days into 5 general themes: Solutions for Marine Protected Areas management and conservation of marine resources; Fisheries management; Research for management action; Effective marketing of Belize’s reef nationally and internationally; and Sustainable finance of the blue economy. Our partners will share some of the most important results with you. The Belize Marine Fund provides complementary funding, and we are very happy to join forces with other funders, as well as other MAR Fund funding channels to support these initiatives.

Although Angeline Valentine, Program Officer for the Belize Marine Fund, and whom you all know very well, will provide more details on the program tomorrow, I want to share a few numbers. Since 2017, when the program started, we have developed the Belize Marine Fund Strategic Plan and have invested in the main conservation actions through three funding mechanisms: Small, Targeted and Discretionary grants. We have funded 45 projects with a total of over 1.3 million dollars, leveraging 2.6 times that amount, and have worked with 23 civil society organizations. Our work is now guided by this Strategic Plan.

It is a pleasure to work with the partners you will meet in these two mornings. We look forward to their continued engagement and their contribution to better management, conservation and restoration practices of coastal and marine resources and marine protected areas in Belize, for the benefit of the country and the Mesoamerican reef region.

Enjoy the conversations with the partners making a difference on the ground and in the water.

Welcome once again, and thank you.

OPENING REMARKS

Kennedy Carrillo

Chief Executive Officer

Ministry of Blue Economy and Civil Aviation



I'm grateful to the Belize Marine Fund and to all of you present today as we join together to discuss the magnificence of Belize's marine biodiversity and the important task of keeping it that way. For the Ministry of Blue Economy and Civil Aviation it is important that we continue to be engaged with partners such as the MAR Fund, because our vision and efforts must always be aligned. As an evolving phenomenon, globally, more so important to us nationally, we know that Blue Economy depends directly on the health of the ocean spaces, including coastal zones and associated ecosystems such as mangroves, seagrass, reefs, islands, marine environment, and the open ocean.

The opportunity to address you is both exciting and timely – a mere year and a half ago, the Ministry of the Blue Economy was at its nascent stage. We now tell the story of a Ministry born in the midst of a COVID-19 pandemic that had crippled the economy of our country Belize. Fast forward to 19 months after and we can surely boast of a Ministry of Blue Economy that very quickly and successfully rose to the occasion in the fulfilment of its vision - to contribute to the gross domestic product of our country through the use of our blue resources in a manner that is environmentally responsible and sustainable.

Our important role in the Blue Bonds negotiations resulted in a conservation agreement that will ensure that we meet important conservation milestones, not only as a condition for relieving our country of 500 million dollars of debt, but also a means of securing important funding for advancing the work of marine conservation. As a chair of the Belize Fund for a Sustainable Future, I can share with you that, together with our partners The Nature Conservancy, we have seen the establishment of a board of directors that is fully representative of the important stakeholders in marine conservation, both Governmental and non-governmental. The board is now in the process of setting up the secretariat, which will be very instrumental in ensuring that by January of 2023, grants are available to all our partners engaged in this important work. The Blue Bonds will surely be an important chapter to read in the making of the Blue Economy in Belize.

Another important chapter will be the development of Belize's first ever Blue Economy Policy and Strategy, and its 5-year Maritime Economy Plan. The latter we accomplished through an important collaboration between the MAR Fund and our co-manager, the Turneffe Atoll Sustainability Association – we express our gratitude.

This week we're submitting this important package to cabinet for consideration and endorsement. Quite an achievement that we're excited and proud about. Both of these documents are integral to the mandates of the Ministry of Blue Economy and Civil Aviation. But more than that, to all those governmental entities with responsibility for tourism, renewable energy, maritime transportation, economic and sustainable development. It is also vital to all our partners, both at the community, and as well, at the international community level. They reflect the government's strategic development agenda as presented in Plan Belize to harness the bounty of green and blue economies in a manner that is strategic and inclusive. Both documents complement each other and provide the necessary overarching guidance to our Ministry to develop Blue Economy in Belize consistent with Blue Economy approaches and guiding principles, but also considers Belize's present current capacity challenges, scientific knowledge, good governance, gender equity, and national international commitments.

The policy calls for developing the strengthening of four overarching priorities: a governance framework for Blue Economy development; Incentives for blue economy development; Capacity building; Education and research, as well as resource mobilization.

Today the Ministry of Blue Economy of Civil Aviation stands at an important junction.

We are grateful for the opportunity to discuss opportunities for collaboration and implementation of Belize's Blue Economy development, policy and strategy, as well as its 5-year Maritime Economy Plan as we continue to perfect this exquisite, well-choreographed balance between taking advantage of, without exploiting, our blue wealth and heritage. We surely are cognizant that we can't do this alone. We must not do it alone, for doing so we would be cheating ourselves of the opportunity to be a global example of what innovation, collaboration, and harmonization of efforts can accomplish.

With this said. I thank all of you for this opportunity, and wish you only the best in your deliberations over the next two days, thank you so much.

OPENING REMARKS

Dr Kenrick Williams

Chief Executive Officer

Ministry of Sustainable Development,

I have to join in registering my colleague's enthusiasm for the next 2 years, because we recognize that there is a lot of work ahead of us and I am certainly excited and registering the excitement of our Ministry in joining the discourse this morning.



Equally I have the pleasure of joining you in welcoming all the guests, colleagues, and friends to this second Biennial Conference for the Belize Marine Fund. I'm pleased to be part of this welcome party on behalf of our Ministry because we also think that this is an important event - an important platform and important arena as echoed by the speakers before me.

The vision of the Belize Marine Fund is really to provide long term financial sustainability to both State and non-state partners for addressing high priority, marine resource management and conservation issues in Belize and the greater Mesoamerican reef ecoregion. In operationalizing this vision, the fund over the last couple of years have focused on what I saw was three core strategic or thematic areas: 1) looking at improving management effectiveness of these marine protected areas across the national landscape or seascape; 2) Looking at reducing pressures on our marine resources which we know it's been very important and more prevalent as a result of COVID-19 and associated economic pressures and social pressures, and, of course, 3) effective marketing of Belize's reef at the national and international levels.

We always say we're doing good work but we don't make enough noise about the good things that we do, and about the good things we have as a country, and so the Belize Marine Fund has been really helpful to scale up some of the efforts in doing so. The Belize Marine Fund therefore, has definitely maintained an influential program which has yielded multiple, successful, transformational changes within the national seascape. These objectives and efforts clearly align with the Plan Belize's medium term development strategy, and the strategy of my Ministry.

Colleagues. This government is really committed to ensuring that there's proper planning and synchronization between the economic activities and environmental sustainability to help propel desired economic benefits while preserving the integrity of our natural resources. Plan Belize, our guiding North Star, really recognizes that as this country transitions to green and blue economies, sustaining and improving the health of Belize's natural resources and biodiversity is paramount, because this provides a substrate for such initiatives, and this really can be achieved, while also supporting local communities to be partners, to be custodians in the natural capital for future generations. Under the medium-term development strategy, primary focus will be on improving systems and mechanisms that will improve the management of natural resources, with particular focus on coastal and marine resources, the natural forest ecosystems, biodiversity, and water resources.

At the Ministry, given this road map for Belize we're laser-focused on strengthening the policy and institutional framework for improved resource management at the system level. Our government continues to strengthen its partnership with co-managers, and will be finalizing very soon, our national co-management framework, and as a result will be entering into formal discussions and agreements with our partners that we believe will provide a clear basis for joint partnership.

We continue to assess protected areas rationalization and ensure that resource management will be targeted, given our limited financial and human resources. At the national level, we have reactivated the National Protected Areas Council, to foster a collaborative and guided approach to system level management. Through the National Biodiversity Office, we continue to strengthen capacities for the implementation of smart technologies towards targeted approach for protected areas monitoring and enforcement, and we continue to drive new and innovative finance approaches through BIOFIN.

At PACT, we continue to ensure that our grant funds are targeted, that they provide leveragability and additionality. Through the Forest Department, we continue to drive the implementation of the National Restoration Strategy, the Agroforestry Policy and the implementation of the Bond Challenge.

We of course, continue to work with our sister Ministry, the Ministry of the Blue Economy and Civil Aviation, to meet our conservation targets under the Blue Bond. This, of course, is not solely the work and result of the work of the Ministry of Sustainable Development, but really a result of our collective effort our collective will, our collective collaboration and our collective engagement. The occasion of this conference, therefore, provides an opportunity for positive and productive interactions amongst key partners within the environment, economic and social sectors of Belize.

It is also timely and critical as these platforms enable collaborative approaches and spaces. So we've gotten results. Now, with this space we're able to scale up those impacts. This is indeed an opportunity to complement and add value to existing efforts towards the common goal, and an opportunity to ensure that the Belize Marine Fund investments are targeted where they're most needed.

I would therefore like to take this opportunity to express my profound gratitude, and welcome to all participants who have gathered to present on their achievements and on their challenges, the experts from academia, the NGO community, leaders from the public and private sector, philanthropists, young persons, concerned citizens, those who are with us across the country and across the globe.

In closing, then, I must applaud the Belize Marine Fund team for the wonderful job you've done in organizing this event. I can say that I've been constantly updated on where to access, where to engage and make sure that I'm online at least 20 minutes before my presentation. So, they have been on the ball, and I need to congratulate you.

I certainly join in looking forward to the discussion and the engagement, one that will seek to foster collaboration between ourselves and our partners that are gathered at this conference

Again, thank you, and welcome.

PRESENTATIONS – DAY 1

THEME 1: RESULTS ON THE GROUND: SOLUTIONS FOR ENHANCED MPA MANAGEMENT AND MARINE RESOURCES CONSERVATION

- RESILIENCE ANALYSIS OF BELIZE’S PROTECTED AREAS SYSTEM TO CLIMATE CHANGE
- EXPANDING BELIZE’S NETWORK OF MARINE PROTECTED AREAS
- CONTRIBUTING TO RESILIENT FISHERIES BY STRENGTHENING MANAGED ACCESS COMMITTEES

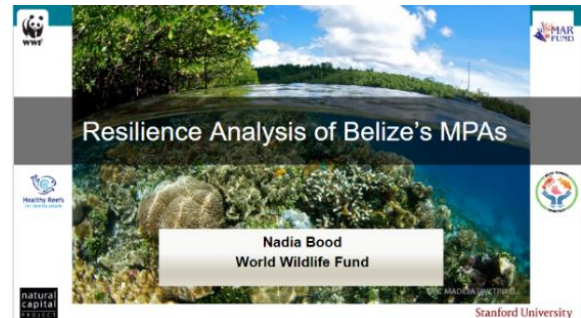
RESILIENCE ANALYSIS OF BELIZE’S PROTECTED AREAS SYSTEM TO CLIMATE CHANGE

Nadia Bood

World Wildlife Fund

The World Wildlife Fund has conducted a ‘Resilience Analysis of Belize’s Marine Protected Areas (MPAs)’, focusing on characterizing ecological resilience in fourteen of Belize’s marine protected areas, as part of a regional MPA resilience assessment that integrated data spanning the period 2006 to 2018. Eight indicators (live coral cover, fleshy macroalgae, coral species richness, coral disease prevalence, coral recruitment, herbivorous fish biomass and urchin density, along with temperature, as an environmental stressor) were used to form an Integrated Reef Resilience Index that can be used by MPA managers to evaluate the level of MPA resilience over time. Three MPAs received a good score; Hol Chan Marine Reserve, South Point Lighthouse Reef Atoll SPAG site, and Laughing Bird Caye National Park. 10 MPAs have a “fair” resilience score. Half Moon Caye rated as very good but there was only data for two indicators available so this score is not a true reflection of resilience. Whilst not included in the assessment, sedimentation is also considered an important future indicator, with watersheds identified as driving changes in reef resilience through sediment export.

The case study (*Analysis of Resilience to Climate Change for Marine Protected Areas of the Mesoamerican Reef*) summarized the findings of the analysis, providing information on the resilience level of each of the targeted MPAs, and identified recommended strategies for improving resilience. This was shared with managers, along with the ‘*Integrated Reef Resilience Assessment Guide*’, which ensured the assessment could be replicated in the future.



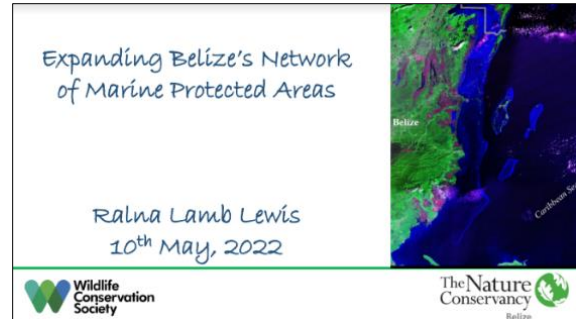
EXPANDING BELIZE'S NETWORK OF MARINE PROTECTED AREAS

Ralna Lamb Lewis

Wildlife Conservation Society

On November 4, 2021 the Government of Belize signed the Conservation Fund Agreement, legally committing Belize to the expansion of biodiversity protection zones under “high protection” non-extractive replenishment zones to represent up to 15% of Belize’s ocean, inclusive of the Economic Exclusion Zone (EEZ). Until then, only 6.8% of Belize’s territorial seas has been under strict protection, with, gaps in representation of key marine ecosystems – particularly those in the deep sea. A multi-agency collaboration with the Government of Belize has been working on expansion of Belize’s marine protected areas network to designate at least 10% of the territorial sea as strictly protected area (IUCN Cat. I & II), in line with Belize’s international commitments in meeting biodiversity goals, fisheries and climate adaptation objectives. This included full protection of a minimum of 10% of all ecosystem types within an efficient network of Replenishment Zones (RZs), where no extractive activities are allowed. Following the signed agreement, 11.83% of Belize’s ocean has been declared as biodiversity protection zones under high protection. This includes Phase I sites identified in the National Replenishment Zones Expansion project, and the declaration of additional sites from the Marine Conservation and Climate Adaptation Project (MCCAP) at South Water Caye Marine Reserve and Turneffe Atoll Marine Reserve.

The project’s technical design included: 20 fisheries, climate and ecosystem data layers, 10 socio-economic data layers, incorporation of a cost model, and an interactive PC based tool for consultation. As a result, there was great synergy among all scenarios, keeping existing replenishment zones and expanding in existing marine reserves, with the recommendation that a phased approach be taken for expanding the system of replenishment zones. Phase 1 focuses primarily on open sea expansion - these areas are the most underrepresented in the present Marine Protected Areas (MPA) system and, in anticipation of the development and expansion of the deep-sea fishery, contribute to use of the precautionary principle in future extractive use of the deep sea. The expansion satisfies the 10% goal for both protection and ecosystem representation, satisfies the guiding principles for replenishment zones, including connectivity, representativeness and replication of habitats, and includes areas of special interest such as SPAGS, turtle nesting sites, and resilient sites.



CONTRIBUTING TO RESILIENT FISHERIES BY STRENGTHENING MANAGED ACCESS COMMITTEES

Nicanor Requena

Environmental Defense Fund

Belize’s Managed Access framework has been built on the principles of resource ownership by the fishers. This is



expressed through the Managed Access Committees - the decision-making bodies established for each Managed Access Area, and comprised of fishers. EDF has been collaborating with its partners in Belize to build capacity of these committees to lead changes in fisheries management towards building climate resilience, functional replenishment zones, effective multispecies finfish management and improved management of recreational fishing.

This work builds on the fisheries management reforms secured over the last decade in Belize and will help ensure effective implementation and resilience of the Managed Access model. The project focuses on strengthening the engagement of fishers and improving communication between the fishers, the Belize Fisheries Department and MPA co-managers, providing a platform for discussion and input from fishers to enhance fisheries management.

It also provides a platform for improving fisher and fishing communities' ability to prepare for, and recover from, climate change impacts on marine life and the fisheries, building fishery and community resilience. Providing fishers with an improved understanding of climate change impacts on marine ecosystems and the impacts this can have on the marine resources and their livelihoods, engages them in informed support of and participation in the establishment of replenishment zones, the adaptive management of multispecies finfish, input into proposed management of the recreational / sport fishing sectors and other national strategies designed to increase sustainability and resilience of the marine resources. Through this engagement, it becomes feasible to strengthen science-based fisheries management to take pressure off Belize's fisheries as they respond to climate change, developing fisheries and markets for species that are less sensitive to climate change and helping communities prepare for change and become more resilient to the effects of climate change.

QUESTION AND ANSWER SESSION 1

Question for R. Lewis, Wildlife Conservation Society: What does no-take/replenishment zone really mean? Is any kind of fishing permitted? For example, sports fishing or other form of development and/or extractive activity. *I. Fairweather Morrison, Oak Foundation*

R. Lewis: Under our definition for Replenishment Zone there should be no type of extractive activity. No type of fishing should be occurring; however, I do believe that the expansion that occurred for Sapodilla Cayes Marine Reserve does allow for some recreational fishing in some of the zones. But the definition developed through this project would not have allowed that to occur.

Question for R. Lewis, Wildlife Conservation Society: Corozal Bay Wildlife Sanctuary in its entirety helps to make up the total replenishment zones for the Blue Bonds commitment, yet none of the recommendations coming out of the MCCAP project for the zoning of CBWS were considered. What is the reasoning for this not being considered? *J. Verde, Sarteneja Alliance for Conservation and Development*

R. Lewis: When we met with the Fisheries Department it was decided that when they conducted the Marine Spatial Analysis, another commitment under the Blue Bonds conservation agreement, the Corozal

Bay Wildlife Sanctuary will be looked at that time, but not in this initial phase. It will be considered in the marine spatial analysis exercise. So those recommendations haven't gone away - they still exist.

Question for R. Lewis, Wildlife Conservation Society: The 7.8% existing replenishment zone is mainly conservation zones that actually allow either catch and release, or subsistence fishing. Corozal Bay, Glovers, for example, Port Honduras conservation zone allows sport fishing, so it seems incorrect to call these terms strict. No take. They would be considered highly protected. Also, the Sapodilla Cayes extension allows recreational fishing, with no limits on fishing. I think we still need to report on actual no-take areas. Right now, Healthy Reefs Initiative has this calculated at 1.5% of Territorial Sea. This doesn't include the newly declared areas. Can you confirm which of these new areas are full protection from all forms of fishing? *M. McField, Healthy Reefs Initiative*

R. Lewis: Under the new expansion, all of these areas should be restricted to all forms of fishing - commercial fishing as well as recreational fishing and subsistence fishing. We will be able to confirm that when we have a copy of the Statutory Instruments, but that was the agreement that was made.

Question for R. Lewis, Wildlife Conservation Society: Do you include catch and release fishing in your definition of no-take zones? *C. Recchia, Summit Foundation*

R. Lewis: The newly expanded areas will not include catch and release, or what we call recreational fishing. That was the agreement made. But until we see the signed Statutory Instruments, we will know exactly what the legislation says. But that was the agreement when we went about doing this exercise for the final areas.

Question for R. Lewis, Wildlife Conservation Society: What plans are there to socialize this information with resource users as I believe they're not aware of this development. *C. Mahung, Toledo Institute for Development and Environment*

R. Lewis: We will be partnering with the Fisheries Department to socialize the results of the Replenishment Zone expansion. The original consultations we held for this were several years ago, and followed the recommendations of the fishes, but it is quite some time since we visited this with the fishers themselves. So that is our next step...we are planning for this.

THEME 2: FISHERIES FOR THE FUTURE: ENHANCED FISHERIES MANAGEMENT FOR SUSTAINED ECOSYSTEMS AND BIODIVERSITY

- **REBUILDING ABUNDANCE**
- **BUILDING CAPACITY FOR EFFECTIVE LIONFISH MANAGEMENT IN BELIZE'S FISH REPLENISHMENT ZONES**
- **BUILDING KNOWLEDGE OF FISH SPAWNING AGGREGATIONS AT CAYMAN CROWN THROUGH MONITORING AND PROTECTION**

REBUILDING ABUNDANCE

Janelle Chanona

Oceana in Belize

Oceana is an international organization that is campaign driven, channelling its resources towards strategic campaigns that achieve measurable outcomes that will protect and restore the abundance of the ocean. It identifies problems and solutions based on scientific research and teams of multidisciplinary experts such as lawyers, communicators, scientists, and advocates, to achieve tangible results for the oceans. Oceana opened its office in Belize in November, 2009, with an overall long-term vision for Belize's reef as a *thriving ecosystem, capable of producing abundant, healthy marine resources that support a vibrant and sustainable economy for Belizeans*. It promotes the importance of protecting the over 15,000 beneficiaries of Belize's fisheries industry, and the use of sustainable methods and practices critical to the sustainable development and exploitation of Belize's coastal and marine resources.



Oceana's collaborative fisheries work in Belize has resulted in significant successes - in December 2010, Belize banned all forms of trawling, in 2017 a moratorium was declared on offshore oil drillings, and in 2020, the Government of Belize banned gillnets. The Coalition for Sustainable Fisheries and Oceana were able to raise Bz\$2.5 million to support eligible gillnet users in transitioning away from gillnets to alternative means of income generation, and providing direct financial support during the process. Oceana is now working with the Belize Fisheries Department and Shellcatch on electronic reporting to collect and compile data through a mobile app for the fisheries sector – both fishers and regulators – as part of the Fish Right Eat Right campaign.

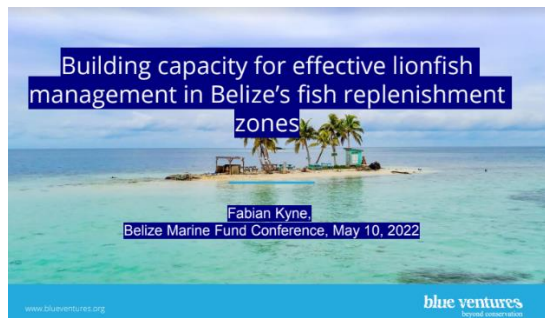
Oceana has recently released the *State of Belize Fisheries Report, 2020*, and *Here's the Catch – Belize's Fisheries Audit*. Both reports highlight the strong foundational policy for environmentally sustainable fisheries management embodied within the Fisheries Resources Act (2020). Despite this, several of the 54 commercially fished species are considered to be at risk, with no or limited information on the status of

98% of the stocks. The reports also identify that improved, coordinated data collection and accessibility to effectively track fish stocks, in addition to capacity building and inclusive participation of fishers and fisheries personnel, and decisive policy action can assist Belize's fisheries to rebound.

BUILDING CAPACITY FOR EFFECTIVE LIONFISH MANAGEMENT IN BELIZE'S FISH REPLENISHMENT ZONES

Fabian Kyne

Blue Ventures



The lionfish is a very successful invasive species that has been slowly but effectively expanding its range through the Americas. There is no possible way to eradicate this species but it can be controlled. The vision of the National Lionfish Management Strategy (2019-2023) and the Lionfish Working Group is to 'adaptively manage lionfish in a participatory manner, to protect and improve livelihoods of all Belizeans and the health of Belize's marine environment'. In the knowledge that complete eradication of lionfish is not feasible, Blue Ventures has been developing a long-term, community-led monitoring program for guiding effective lionfish management, monitoring and evaluation efforts across Belize, with recommended mechanisms for control of this invasive species.

In 2015, four marine reserves (South Water Caye, Caye Caulker, Bacalar Chico and Turneffe Atoll) were selected as high priority sites and as pilot sites for implementing the guidelines. In 2020, Blue Ventures then supported Belize marine protected area managers in establishing a scalable model for effective and participatory lionfish management, based on adaptive management principles and capacity building of key stakeholders.

Through this initiative, Blue Ventures has trained 18 MPA staff and partners in the principles of lionfish monitoring and adaptive management. Updated population surveys have been implemented in the four priority MPAs, with South Water Caye Marine Reserve planned for 2022. Based on the assessments, a Lionfish Control Plan has been developed for each site with quantitative targets, using a Limits of Acceptable Change model that defines the tipping point, beyond which there is no longer sufficient suppression of the lionfish population to maintain ecological integrity. Analysis of the indicators following implementation of the Turneffe Atoll Marine Reserve Control Plan shows that the control programme can be successful. A number of lessons were learnt during the pilot phase, including the need to adapt the Plan to the specific needs of the site, the need for participatory and community-led lionfish control supported by the MPA regulations, and increased emphasis on data sharing and feedback with communities. Ultimately, Blue Ventures would like to see lionfish control in 25% of Belize's nearshore by 2024, though the expense for implementing the Lionfish Focused Search is recognized as a barrier.

BUILDING KNOWLEDGE OF FISH SPAWNING AGGREGATIONS AT CAYMAN CROWN THROUGH MONITORING AND PROTECTION

Cecilia M. Guerrero

Toledo Institute for Development and Environment



The Cayman Crown is recognized as a high biodiversity area, strategically important in the protection of IUCN red listed marine species, for its role in connectivity and larval dispersal / resilience, and as a replenishment area for finfish species. With a live coral cover of 60% (one of the highest in the Caribbean) it is considered a Jewel of the Mesoamerican Reef. This transboundary area lies at the southwest end of the Cayman Trench in the Gulf of Honduras, and was declared protected in 2020 by both Guatemala and Belize. In Belize, TIDE has been working with partners to achieve the expansion of Sapodilla Cayes Marine Reserve (SCMR) to include Belize's portion of the Cayman Crown area, achieved in 2020 as part of the national replenishment zone expansion (the first to include waters within Belize's Economic Exclusion Zone) and is currently applying for the co-management of the MPA. Ensuring that transboundary issues are well understood is critical to avoid challenges in the transboundary context, with the need for clear bilateral agreements, and for research activities to be designed and planned as a collaborative effort between the relevant countries involved.

Since 2020, TIDE has built its capacity for research and monitoring in the Cayman Crown area through training for monitoring the fish spawning aggregations and coral reefs, and procurement of equipment. It has characterized potential fish spawning aggregations sites, contributing to the '*Knowledge, Monitoring and Protection of Mesoamerican Reef's Fish Spawning Aggregations and Replenishment Zones*'. The work, important in informing the development of the management plan for the area, resulted in evidence of physical and behavioural changes in fish species indicative of spawning, suggesting it is an important replenishment site for tiger and black grouper, dog, cubera and mutton snapper, horse eye and crevalle jack as well as a number of other commercial and non-commercial species. Charismatic megafauna (pilot whales, sperm whales) were also identified as using the area as well as pelagic fish species (marlin, sailfish, wahoo, mahi mahi, kingfish and various species of tuna). The Cayman Reef is used extensively by fishers from Belize, Guatemala and Honduras, with the transboundary nature of the site facilitating illegal fishing. Effective protection and management is therefore critical if the spawning aggregations are to continue to strengthen the regions finfish populations.

QUESTION AND ANSWER SESSION 2

Question for F. Kayne, Blue Ventures: How will the lionfish implementation work? Is there going to be permission for the harvesting of lionfish within parks, but restrict other forms of fishing, and what are the practicalities and implications for enforcement? *Imani Fairweather Morrison*

F. Kayne: Through the National Lionfish Working Group we have been having a number of engaging discussions over the past 2 years on this topic. Policy recommendations came about, to provide more clarity on existing lionfish regulation and access requirements to the different zones within protected areas. So, we're hoping that these recommendations will provide this sort of guidance framework that looks at both replenishment zones and general use, and focuses on the different resource users involved.

To share an example, we are looking in terms of implementation of lionfish control in the no take zones and the fish replenishment zones, working with the Fisheries Department, the regulatory authority, to develop community lionfish brigades with persons nominated by the Department and the co-management agency. These brigades would have permission and authority to conduct to connect, remove this within those and take things under direct supervision.

Question for N. Requena, Environmental Defense Fund: The Managed Access Committee (MAC) has not been functioning since before COVID-19. There are several components that still are not functioning. My understanding is some of this will be addressed by the conservation fund. We have spent significant time on this. Can you expand on the way forward for this not only to work but to benefit the fishers, especially since there will need to be further consultation? *N. Martinez, Belize Federation of Fishers*

N. Requena: There were some Managed Access Committees that had not been meeting even before COVID-19, such as the one for Fishing Area 1 and 2. Yes, there is much more work that needs to be done with all MACs, including but not limited to convening regular meetings and ensuring that the MACs are functioning well. This will help enable the fishermen associations/groups to access funding support from the conservation fund. Our goal is to help develop an action plan for the MACs. This requires collaborative effort with Belize Forest Department, fishermen associations, Belize Federation of Fishers, fishing cooperatives, co-managers and other stakeholders.

Question for J. Chanona: Where did the information come from for the fisheries audit, and would you say that it is 'reliable' data? *Anonymous*

J. Chanona: As it is a big picture exercise, it was collected from a wide range of sources, so NGOs working in Belize, fishers, scientists - everyone we could reach out to, and using desktop reviews as well as interviews. We even asked folks to share things that weren't publicly available but that they knew existed, to ensure we were as comprehensive as possible. I'd like to tell you that everyone responded but that's not the case. As for the veracity of the data, the report is a compilation of publicly available information and was peer reviewed by Dr Kendra Karr from EDF prior to publication.

THEME 3: RESEARCH FOR MANAGEMENT ACTION: INFORMING DECISION-MAKING IN MARINE RESOURCES MANAGEMENT

- **ONGOING REEF REPLENISHMENT IN SOUTHERN BELIZE WITH AN EMPHASIS ON MAPPING AND QUANTIFYING NATURAL AND REPLENISHED ACROPORID COVER**
- **REWILDING BELIZE'S REEFS THROUGH MARINE PROTECTED AREAS: THE CASE STUDY OF TURNEFFE ATOLL**
- **EFFORTS TO SAFEGUARD BELIZE'S ENDANGERED ANTILLEAN MANATEES**

ONGOING REEF REPLENISHMENT IN SOUTHERN BELIZE WITH AN EMPHASIS ON MAPPING AND QUANTIFYING NATURAL AND REPLENISHED ACROPORID COVER

Lisa Carne, Jamani Balderamos, Steve Schill and Emily Peters
Fragments of Hope



Laughing Bird Caye is one of the oldest and most successful Acroporid restoration sites in Belize, possibly in the Caribbean, and benefits from long-term data sets. Fragments of Hope began work in 2006, scaled up in 2010, 2015, 2016, 2020, with a total of 87,000 corals outplanted. But how successful has this been? Measuring success of reef replenishment activities is critical. Quantification can be achieved in a number of different ways – for example, the number of coral outplants, and the change in coral cover in fixed plots using diver-based mosaics – but all have their drawbacks. Large-scale monitoring of restoration sites is difficult using traditional methods, and satellite imagery is not yet at a sufficiently satisfactory resolution to be able to produce outputs at the scale required.

Since 2019, Fragments of Hope has been addressing this monitoring need by training community researchers in the use of drones for the creation of orthophoto mosaics and digitization of colonies in GIS. Using object-based classification of coral features based on an orthophoto mosaic (2cm RGB) acquired with a DJI Phantom 4 Pro flying at 300 ft, it has been possible to document the success of replenishment of Acroporids at Laughing Bird Caye National Park and Moho Caye from 2019 to 2021 and comparing growth rates with those of a large natural stand of *Acroporis cervicornis* and *A. prolifera* hybrid at Loggerhead Caye. However, there are challenges – drones will only work in shallow sites and perform best in early morning, clear light conditions. The drones are relatively expensive, and are not waterproof, leading to accidental loss in the marine environment, there is an inability to pick up microfragments (elkhorn coral outplants under a certain size), to identify whether corals are alive or dead, and there is some subjectivity in classification, so ground truthing is also critical. Despite this, drones have proved to be one of the most powerful tools in being able to demonstrate replenishment success, demonstrating that > 20% of a hectare of fringing shallow reef is restored Acroporids at LBCNP. Similar success has been seen at Moho Caye, with an increase of live coral cover from approximately under 10% to 35 – 40% on

the replenishment sites. A preliminary investigation of E-cognition / artificial intelligence mapping techniques using high-definition satellite imagery have shown that remote sensing can be used to identify reef presence, but not the state of the reef. However, it can be used very successfully to quantify and visualize cumulative dredging/development impacts that will affect reefs, and track changes over time. Whilst this has been focused on the reefs in front of Placencia, it really needs to be scaled up to national level.

Demonstrated successes can be replicated – more recently, Fragments of Hope have expanded their replenishment activities to Hol Chan Marine Reserve in response to the need to strengthen resilience of reefs as Stony Coral Tissue Loss Disease sweeps through the area.

CONSERVING THE ENDANGERED ANTILLEAN MANATEES IN BELIZE THROUGH RESEARCH, MONITORING AND COMMUNITY ENGAGEMENT.

Jamal Galvez

Clearwater Marine Aquarium Research Institute

The Antillean manatee (*Trichechus manatus manatus*) is an endangered species in Belize and the region, and faces increasing anthropogenic threats, primarily from watercraft. Belize is considered a regional stronghold for this species, and critical in the global initiatives to conserve this species. However, Belize has seen a steadily increasing number of strandings over the years, particularly from 2012 onwards, with the annual maximum at 42 strandings in 2018. Manatee deaths are directly correlated to tourism numbers, as demonstrated during COVID-19 when the number of manatee deaths fell significantly as Belize closed its borders to tourism.

Clearwater Marine Aquarium Research Institute provides support for projects in Belize focusing on research, awareness and targeted conservation actions to ensure the long-term viability of this charismatic species. The Research Institute conducts health assessment, tagging and aerial surveys to monitor the population numbers, population genetics, distribution, individual movement, reproductive success and behaviour of manatee populations in Belize, and the links between ecosystem and animal health. Where dredging occurs, trace elements from the sediments are released into the waterbody, taken up by the seagrass beds and then bioaccumulated by these large herbivores, which can have significant implications for species survival. As the longest longitudinal study on manatees in the world, running from 1997 to 2019, the outputs are used to identify key manatee use areas and where these intersect with high-risk areas, to advise on the development of manatee-specific regulations at both site and national level. In 2022, CMARI national aerial survey was conducted as part of a regional initiative, to improve knowledge of the manatee population and distribution, to inform marine spatial planning in Belize, promoting the manatee as an important indicator species of ecosystem health. Where risks have been identified, strategies have been developed and implemented – for example, the training of over



1200 boat captains and tour guides in best practices around manatees. Also considered critically important are awareness and community engagement strategies in Belize, which emphasises building stewardship in key areas for the safeguarding of this at-risk species.

QUESTION AND ANSWER SESSION 3

Question for L. Carne, Fragments of Hope: We say the climate change will impact reefs but Lisa's work suggests the death by a zillion cuts. Even in the face of those challenges, the replenishment seems to be working. Is the scale impactful, though and is new disease compromising things? *I. Fairweather Morrison, Oak Foundation*

L. Carne, Fragments of Hope: Let me clarify that when I said 'death by a zillion cuts' I meant the shoreline protection in front of us. All these small dredging events may not look like one big thing, but any time there is an EIA assessment on the Placencia Peninsula for a resort, it never looks at cumulative impact – only individual impacts in isolation as if there weren't other things happening. We need a bigger picture view of all these developments and their cumulative impacts.

The question of No take zone - we do feel it's very, very important to the coral health, because there are things that eat the corals - snails and fireworms, and the things that eat the things that eat the corals are what we like to eat - like lobsters and big grunts, so we definitely can see a difference that in the no-take zones the corals are doing much better than outside of the protected areas.

The new disease is definitely devastating our reefs. It affects over 20 species, but it's not affecting the Acroporids. If we don't get off of fossil fuels, then there is no hope if the warming continues the way it's projected with the latest reports that have come out. Replenishment will be a temporary fix. It may not be good for the reefs if we don't change everything that we're doing very drastically, very soon. So, I'm sorry to end on that note but that is the reality.

Question for Jamal Galves, Clearwater Marine Aquarium Research Institute: Why Guatemala? Are there limited manatees/strategies in Mexico and Honduras? *I. Fairweather Morrison, Oak Foundation*

J. Galves: Actually, it's not just Guatemala, but at the start of this initiative, we reached out to the entire region from Mexico to Panama. When I was in Panama, I met with the Department of Environment in terms of getting them on board. These entities are behind as it relates to conservation of manatees, but the interest is there.

Mexico will be starting their surveys in the upcoming weeks. Guatemala is a part of it as well. Honduras as well - so we reached out to the entire region to get participation, and unfortunately most of the entities in those countries either lack the funding to be able to participate, or perhaps the interest to have done so. So currently the communication has been between Mexico, ourselves and Guatemala, and also because we know that we share the region's manatee population, particularly with Mexico. We've seen

and documented manatees traveling between Mexico and Belize. We've seen it from the genetic samples that are collected in Mexico and Belize. They are similar - these animals are sharing the population that they're going across the borders as well.

Question for Jamal Galves, Clearwater Marine Aquarium Research Institute: Can you share the aerial survey route used for the national survey – I would be interested to know whether the survey route replicates the flight routes that SACD use when they're doing their aerial surveys of the Northern Belize Coastal Complex, and therefore whether the data is compatible for integration into SACD monitoring of this species. *J. Verde, Sarteneja Alliance for Conservation and Development*

J. Galves: The survey was just completed on Thursday, so we haven't even received the preliminary results. Once that is completely completed, that information will be shared - the goal is for people to be informed, and especially being a co-manager and a partner. It will help to inform strategies for implementation within the Northern Belize Coastal Complex area as well. So definitely, I would be glad to share.

Question for L. Carne and J. Galves: Integrating data sets from Lisa and Jamal will be critical to the Marine Special Planning and will need to be factored into proposals before they are approved and relevant policies are finalized. *Anonymous.*

L. Carne: We have shared a lot of information with Coastal Zone Management Authority and Institute, because they were leading an effort with updating the marine habitats. However, the final slides I shared have just been put together. I will be happy to share them with the Fisheries Department, with DoE, with anyone interested in the data.

J. Galves: Before we started these surveys, we were in discussion with the Fisheries Department, and through the Prime Minister's Office and the Blue Bond Unit to bring them on board so that they can be part of this process. I am encouraged and optimistic that these survey results and studies will be included in the marine spatial planning, as I believe they want a well-rounded, robust proposal as it relates to trends in the marine ecosystems, so we are hopeful for the support of the Ministry of Blue Economy and Civil Aviation and Fisheries Department to help endorse and support this initiative.

**PROCEEDINGS OF THE
BELIZE MARINE FUND 2nd BIENNIAL CONFERENCE
10th – 11th May, 2022**

DAY TWO

**WELCOME ADDRESS AND OVERVIEW OF
DAY ONE**

Nayari Diaz-Perez,

Executive Director

Protected Areas Conservation Trust (PACT)



Good morning! I join the Belize Marine Fund in welcoming all the participants who are returning from yesterday's session and those that are just joining us today. I would like to start off by first acknowledging the presence of Maria Jose Gonzalez, the Executive Director of the MAR Fund, Imani Morrison, representative of the Oak Foundation, and Janet Gibson, of the BMF Steering Committee. A special good morning and welcome back to you ladies on this second day of the second Belize Marine Fund Biennial Conference.

As we said yesterday, this is a celebration of the work of the Belize Marine Fund in marine conservation in Belize. Through its work, PACT complements the BMF work, particularly in site-level management interventions, and so this is also I believe, a celebration of collaboration and partnership between and among government, NGOs, donors and other partners.

As a part of the wider MAR Fund, I am proud of the contributions that the BMF has been able to make for marine conservation efforts in Belize. Of course, we must acknowledge and remain thankful for the support of the Oak Foundation to the Belize Marine Fund that has made this possible. Yesterday we had several different presentations, as it relates to the contributions that the BMF has been making to the work of marine conservation in Belize. We heard from the Ministry of Sustainable Development, as well as the Ministry of Blue Economy, of the different ways in which Government is creating the enabling environment and supporting the objectives of the BMF and marine conservation in Belize. We were reminded of the importance of marine resources to the Blue Economy and the fact that we must synchronize economic activity and the use of marine resources to maximize the socioeconomic benefits that they bring to our citizenry.

We were also reminded that key to the results that we have achieved, and key to the results that we intend to achieve, is the collective will, collaboration and engagement of all actors on the ground and at the policy level, and we should really look forward to the advancements that these Ministries are targeting via their ongoing efforts. And so, our partnership with the Government Ministries and their agencies, the actors on the ground, is key and should be continuous for us to continue achieving the objectives of the Belize Marine Fund, the MAR Fund and all the other mutual objectives that we share in the conservation sector.

We also heard, during the thematic sessions, about results that are being achieved on the ground. We learned about the resilience analysis conducted by World Wildlife Fund, and the fact that there are now guidelines available for continued studies and assessments of marine protected areas - a great achievement when it comes to tackling the issue of climate resilience in protected areas. We also learned about the recommendations from the Wildlife Conservation Society project on the expansion of replenishment zones, contributing to the achievement of the first deliverable under the Blue Bond agreement. Of course, in this discussion, we also took note that there needs to be additional clarity on the definition of no-take zones and clarifying whether the new zones that have been established through the expansion of the MPA network really will benefit from full restriction, or otherwise – a point that, while moving forward, will need to be clarified. We also learned about the work that has been done in management of access for fisher's resilience, building capacities of at least 8 Managed Access committees to lead changes in small scale fisheries management, an effort that has been challenged by the recent impacts of the COVID-19 pandemic, but work and achievements that can be built upon in the coming years.

In the section on Fisheries for the Future, we also learnt about the very important fisheries audit that was carried out by our partners at Oceana, and the challenges that have been faced with data collection and transparency in decision making. More importantly, the audit has revealed recommendations for electronic reporting, coordination and capacity building, so that we may improve our effectiveness in science-based decision making. On the front of species management, we were also reminded of the fact that we are still grappling with the lionfish invasion, and reminded that as eradication of this invasive species is impossible, the focus has to be on control and long-term management. And so, the National Lionfish Management Strategy, which seeks to develop a long-term management program, needs to be implemented and supported so that we can continue to support MPA managers on the ground with training and control plans to address the lionfish issue. Also very importantly, and information that is not widely known to all, is the work that is being done by the Toledo Institute of Development and Environment in monitoring and protection of the Cayman Crown area and the fact that they have been able to characterize potential spawning aggregation sites in the short time since the legal recognition of the area. The biggest achievement through this venture, is the legal recognition and management of this area as part of the Sapodilla Cayes Marine Reserve, setting the basis for continued work in terms of monitoring and protection of what is known as the 'Jewel' of the Spawning Aggregation areas in the country.

Lastly, in the last segment on research and management actions, we were able to reflect on the work that has been done on coral restoration and Fragments of Hope's recent move towards the use of drone imagery to better quantify the success of the restoration efforts that they've been undertaking over the

years, and how to better document the annual changes. We also learnt about the efforts of safeguarding the Antillean Manatees through research, awareness, and the conservation actions of the Clearwater Marine Aquarium, and how they have been responding to the increasing threats to this endangered species; and very importantly, the recommendations that are coming out of that work for manatee specific regulations, as well as population estimates and inclusion of these species in the Marine Spatial Plan, under development at this time by the Ministry of Blue Economy.

As we move towards the second day, we will have an opportunity to reflect on other areas of marine conservation. Specifically, the marketing of Belize's reef at both local and international levels. We were reminded by CEO Williams yesterday of the continuous need for engaging non-traditional partners such as youths and local communities. We will also hear about the effort for creation of a unique brand for the Belize Barrier Reef Reserve System - World Heritage Site, and how this exists within the tourism context of the country and the enhancement of our tourism product - which go hand in hand. We will also be able to reflect on innovations in sustainable financing and Blue Economy.

We learnt from CEO Carrillo yesterday about the Blue Economy Policy and Strategy and the Maritime Economy Plan which are currently being finalized and hopefully will be presented to Parliament for endorsement later this year. We will also learn about the related Blue Bond agreement framework that is enabling the development of a first Project Finance for Permanence for the country. All in all, these efforts are geared towards ensuring the Blue Economy works to support bigger and better outcomes for Belize.

And lastly, but very important is the BMF investments and the impact that they have had. We will hear from our Program Officer – we will hear what the impact has been of the BMF interventions over the last 3 years, and whether the strategy has been successful. As we learnt, since 2017 the BMF has supported at least 45 marine conservation projects and programs through different modalities of funding. And so, as we have an outlook towards the future, it is important for us to stop and take stock of what the impact has been.

I ask you to join me in looking forward to the discussions and presentations that we will have for the rest of the morning.

Once again welcome to everyone.

PRESENTATIONS – DAY 2

THEME 4: EFFECTIVE MARKETING OF BELIZE’S REEF AT NATIONAL AND INTERNATIONAL LEVELS

- **CREATING THE NEXT GENERATION OF CONSERVATION LEADERS: REEF PROTECTORS**
- **THE IMPORTANCE OF BELIZE’S MARINE RESOURCES TO OUR TOURISM PRODUCT**
- **BRANDING FOR CHANGE—ENHANCING NATIONAL AND INTERNATIONAL AWARENESS OF THE BBRRS WHS**

CREATING THE NEXT GENERATION OF CONSERVATION LEADERS: REEF PROTECTORS

Dareece Chuc

Belize Audubon Society



Belize Audubon Society has been working collaboratively with other organizations to raise awareness of marine protected areas through the implementation of the Reef Protectors program - a conservation-based, out-of-school educational program for youths in the northern fishing communities. The program was initiated in 2014, engaging 3rd and 4th form high school students to inspire the next generation of conservation leaders, as a strategy to reduce future pressure on the marine resource of Half Moon Caye-Blue Hole Natural Monuments. It has three main objectives: 1) to raise awareness about marine protected areas and their role in natural resources management and sustaining livelihoods; 2) to develop leadership skills through mentoring and fostering stewardship; and 3) to introduce and provide practical experience in marine research and monitoring methodologies. The program is well structured, with a manual developed in 2021 to guide activities. Collaboration with other organizations has assisted in addressing some of the challenges encountered in implementing the program – the logistical difficulties and increased time and cost required as a result of the location of the northern fishing communities far from the BAS office, and the language barrier of working in largely Spanish-speaking communities.

Through the Reef Protectors program, a total of 43 youths from fisher families have had opportunities to learn about the importance of marine protected areas and marine ecosystems, have developed life and leadership skills, and have had exposure to conservation careers in the marine environment. They also have opportunities to gain marketable skills - 12 participants are open water dive certified and have basic research and monitoring skills, opening up opportunities for transition into conservation careers.

Annual post-program assessments demonstrate that participants are more aware of their role in protecting marine resources and the possible careers they can pursue in the marine science field. BAS also assessed the potential for this having a long-term impact on fishing pressure by tracking the career paths of past participants. 60% of participants moved on to higher education and are employed in non-fishing careers, 18% decided to pursue fishing, 2% have jobs in conservation whilst 10% are unknown. There is

therefore a high expectation that the program will encourage youths from fishing families would engage in career options other than fishing and become environmental stewards. BAS is now launching a Junior Reef Protectors program with primary school children in targeted communities.

THE IMPORTANCE OF BELIZE'S MARINE RESOURCES TO ITS TOURISM PRODUCT

Linette Canto
Belize Tourism Industry Association



Belize is a small destination, but with a rich diversity of cultural and nature-based activities packed into a relatively small area. The three most popular tourism attractions in Belize are the vibrant coral reefs, marine protected areas and idyllic offshore islands. These support coastal and caye tourism employment, and are an important contribution to the national economy. Whether it is scuba diving, fly fishing, sailing, or just strolling down a beautiful beach, here is a direct relationship between the health of the marine environment and the health of the tourism industry. During the first quarter of 2022, Belize had 97,778 overnight visitors, with 64.2% of these staying in coastal locations as a result of these attributes.

The Belize Tourism Industry Association represents a unified tourism sector voice that advocates for issues that benefit its members, influences tourism policy, legislation, and marketing for the sustainable development of the industry and improved quality of the visitor experience. At the heart of BTIA's mission is the recognition of the importance of integrating environmental considerations into sustainable tourism planning. This reflects the outputs of the National Sustainable Tourism Master Plan, which states that Belize's reefs and marine environment are Belize's key tourism assets.

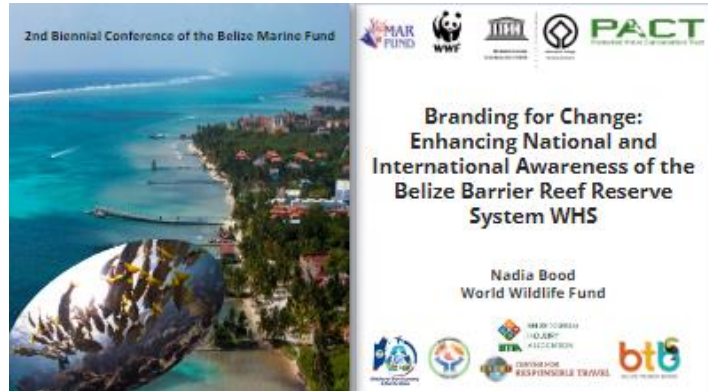
Climate change, littering and pollution, destructive tourism development and overfishing have devastating effects on the marine resources and tourism products. On top of this, tourism has also been significantly impacted by the COVID-19 pandemic over the last two years, with the tourism sector now needing to reimagine Belizean tourism. BTIA will be holding a Summit on this topic, providing a platform to identify where the tourism industry is and where it is going in view of recent history and existential threats, providing an opportunity for critical self-reflection and reinvention. BTIA and its members commit to each doing their part to contribute to a growing and sustainable tourism industry.

BRANDING FOR CHANGE—ENHANCING NATIONAL AND INTERNATIONAL AWARENESS OF THE BBRRS WHS

Nadia Bood

World Wildlife Fund

It has long been recognized that Belize could strengthen marketing of its reef to improve national and international recognition of the values of the Belize Barrier Reef Reserve system - World Heritage Site. This collaborative initiative resulted in the development of a comprehensive branding and marketing strategy that takes into consideration current policies and strategies on the ground for effective implementation of actions that increase audience awareness and appreciation of Belize’s reef. The Center for Responsible Travel (CREST) was engaged to lead development of the Strategy and associated communication and fundraising plans, focusing on a target audience identified as the Belizean public, the existing and future international tourists coming to Belize, and the domestic fishing industry.



The Strategy focuses on a scalable, largely organic marketing strategy that leverages partnerships with NGOs, MPA managers, government agencies, and tourism industry stakeholders, with engagement through interviews, domestic and international workshops, desk, and competitor research. This was supported by the establishment of the Branding Committee, composed of professionals from the BTB, WWF, the Ministry of the Blue Economy and Civil Aviation (MBECA), the Protected Areas Conservation Trust (PACT), Belize Fisheries Department and Belize Tourism Industry Association (BTIA), tasked with creating the BBRRS-WHS Brand. The “Brand Values” identified were designed to be inclusive – *‘we live in the Blue Economy, we foster sustainable tourism, we support responsible consumption of legal fish, we support local education, and we are aligned with the mission of UNESCO’s World Heritage Marine Programme’*. The finalized logo showcases *the vibrant colors and shapes of corals. The turtle is swimming over the reef, brings to life the healthy, thriving ecosystem and recalls the endangered species that call the reef home.*

The Marketing and Communication Strategy is designed to be flexible for different stakeholders as needed, with key Objectives, Actions and Activities for the first year of implementation that include creating and launching the new brand through a new website and social media platforms and at the World Heritage sites, supported by an innovative fundraising campaign. This is strengthened through a marketing partnership with the BTB that promotes the responsible tourism use and conservation of the Belize Barrier Reef and natural blue resources. The Ministry of Blue Economy and Civil Aviation (MBECA) is fully engaged as the key brand manager and will be engaging relevant partners to support the brand.

QUESTION AND ANSWER SESSION 4

Question for D. Chuc, Belize Audubon Society: Is the program for young people who speak Spanish and are going to learn English? And where are most of the young people from? *Anonymous*.

D. Chuc: The program is for young people who live in Copper Bank and Chunox. They are Belizeans, and their primary language is Spanish. They do learn English at school, but we do find that in terms of communicating in English, it is a challenge for them, so we try to incorporate activities within the program to help them with improving their ability to express themselves in English. Not necessarily teaching them English, but providing opportunities to practice in presenting in English.

Question for D. Chuc, Belize Audubon Society: I am wondering about 90% of the participants being from fishing families – was this because only fishing families show interest in the program, and non-fishing families are not interested? *N. Martinez, Belize Federation of Fishers*

D. Chuc, Belize Audubon Society: Yes – that’s what we want – we want young people from fishing families to be enrolled in the program. One of our objectives is to reduce pressure on the natural resource base at Lighthouse Reef Atoll, so if we can encourage more fishing families to be involved in the program and understand the importance of protecting the marine resources, then we hope that even if these young people, especially the young men, venture into fishing, they will be responsible fishers.

Question for D. Chuc, Belize Audubon Society: While I understand how you choose the three communities from the North, the communities from the City felt left out. There are several fishers from the city that uses Lighthouse Reef Atoll for their livelihood, and they and their family members could also benefit from the program. How would you and BAS address the situation of these communities from the city so that they and their family can benefit also? Especially since your head office is located here in the city. *N. Martinez, Belize Federation of Fishers*

D. Chuc: We at BAS are looking into scaling up the program as we realise that many Belize City fishers use Lighthouse Reef Atoll. We are working on collecting information on the number of fishers/families that uses the Atoll from the Belize City area, and then will work towards more targeted programs for these families. Of course we need to fundraise to support our youth stewardship programs, but definitely this is at the top of our agenda. We are happy to liaise with you as we work towards achieving this objective.

Question for L. Canto, Belize Tourism Industry Association: The GOB recently awarded fuel subsidies to tour operators. This incentive will provide more opportunities for tour operators, increase tourism and employment. We know that increased tourism increases damage to the environment and increases waste production. What plans does the BTIA have to minimize these? *Anonymous*

L. Canto: Responsible tourism planning is extremely important. COVID-19 certainly taught us that as human beings, we are having an effect on the planet. When everything was on pause for a while because

of COVID-19, we started seeing Mother Nature flourishing again – so it gives us pause to think how we are contributing negatively to these effects. That is one of the ideas behind the Summit – that we will be able to talk about these things and see what barriers we have - and look at possible solutions. These will be considered as the University of Belize looks at revamping the National Sustainable Tourism Masterplan. These are some of the first steps we have in trying to address these issues.

As the new Executive Director for BTIA, I have been visiting different locations to try and get a handle on what some of the issues are as well, and then we will coordinate with the respective Chapters to see what projects and initiatives we can undertake to deal with the issues that are brought to the table. Finally, training is important as well – we need to open up the eyes of our stakeholders so that they can see what is happening and how they may be contributing to some of the challenges that we are facing. These are just some of the things that we are looking at as we seek to move the tourism industry forward.

Question for L. Canto, Belize Tourism Industry Association: Realizing the shocks from the recent pandemic, is the market able to absorb additional human capital into natural resource management and the tourism sector or should we be looking at alternatives including in the productive sector especially related to food security? *Roberto Pott, The Nature Conservancy*

L. Canto: With regards to tourism during the pandemic we lost a number of great workers with years invested in the industry, so there is a concern about replacing those persons. As tourism continues to grow, the need for good workers will definitely be in demand. However, it is also important for the nation to develop a solid workforce for other sectors as well so that there is not total dependency on any one sector for the health of our economy.

Question for N. Bood, World Wildlife Fund: The rebranding is wonderful. It requires will power especially from the Government of Belize to abide by the UNESCO World Heritage Site regulations. How can we ensure this rebranding will not be tainted by another Stake Bank, another port expansion, another Waterloo, another Harvest Caye? *Anonymous*

N. Bood: We must hold the Government accountable, using both national and international pressure. All our actions must be informed by science and research to ensure the best practices are used, and not be looking at short term economic gain. We strategizing - and come to the table with relevant information and science to show that the reef is a national and international treasure, and that we must continue to invest in conservation actions.

Question for N. Bood, World Wildlife Fund: Has the Government of Belize submitted the expansion of Sapodilla Cayes Marine Reserve to UNESCO to get it included in that site? Also, are there plans to add Turneffe Marine Reserve and possibly others to the cluster of sites in the World Heritage Site?

N. Bood: In response to Sapodilla Cayes, the Fisheries Department reports to UNESCO, and has been very instrumental in keeping track of these things for inclusion. I believe they did flag the expansion of Sapodilla Cayes to UNESCO in the last report (last January). *M. McField, Healthy Reefs Initiative*

A proposal was tabled for Turneffe, as well as for the Chiquibul National Park. When we were discussing Turneffe, the suggestion was made that it first be designated as a Biosphere reserve and then we would work on looking at World Heritage classification, as at the time there were a lot of development proposals for the Atoll, which would have made a submission challenging...but it is something, given the progress that the Turneffe Atoll Sustainability Association has been making for Turneffe, that we really need to look closely at.

THEME 5: INNOVATION IN SUSTAINABLE FINANCING AND THE BLUE ECONOMY: LINKING NATIONAL AND REGIONAL

- **DEVELOPING BELIZE'S BLUE ECONOMY POLICY AND STRATEGY**
- **INVESTING IN A RESILIENT COASTAL ECONOMY: PROJECT FINANCE FOR PERMANENCE FOR BELIZE**
- **GAME CHANGING FINANCE SOLUTIONS...FINDING A WAY TO MAKING MPAS WORK**
- **BLUE ECONOMY REGIONAL PROTOCOL: AN OPPORTUNITY TO ENHANCE REGIONAL, NATIONAL AND LOCAL COORDINATION TO IMPROVE A HEALTHY ENVIRONMENT AND LIVELIHOODS IN THE MAR**

DEVELOPING BELIZE'S BLUE ECONOMY POLICY AND STRATEGY

Maxine Monsanto

Ministry of Blue Economy and Civil Aviation

The Ministry of Blue Economy and Civil Aviation (MBECA) was established in November 2020 for the coordination of development in Belize's Blue Space – both the sea and the sky. With a new portfolio, it seeks to support the sustainable use and development of Belize's ocean space, while minimizing ecosystem degradation and enriching the socio-economic benefits for the country and its people. One of the key principles of the MBECA, is the inclusion of all key partners including governmental, non-governmental, private sector, and communities that rely on ocean-based economies and conservation.

The development of the Blue Economy Development Policy and Strategy (BEDPS) has been a collaborative process, with the support of the multi-sectoral Blue Economy Cluster, comprised of fourteen members drawn from government, non-government and academia. By 2030, through implementation of the BEDPS, the Ministry seeks to have a productive, sustainable, resilient and vibrant Blue Economy in Belize that contributes substantially to the socio-economic well-being of the country and people, and to the national GDP. This is to be achieved through a thriving Blue Economy Development pathway that is holistic, harmonised, innovative and socially just, supported by a robust, science-based management regime of Belize's aquatic resources and space to improve the livelihoods of all Belizeans. It recognizes that current blue space initiatives are disjointed, generally being sector-focused and driven. The Blue Economy is looking at the development of an enabling framework that provides coordination and guidance for investment and development pathways that integrate the need for strengthening climate change resilience. The four proposed policy priority areas include the development of: 1) A Governance Framework for Blue Economy Development, 2) Incentives for Blue Economy Development; 3) Capacity Building, Education and Research, and 4) Resource Mobilisation.



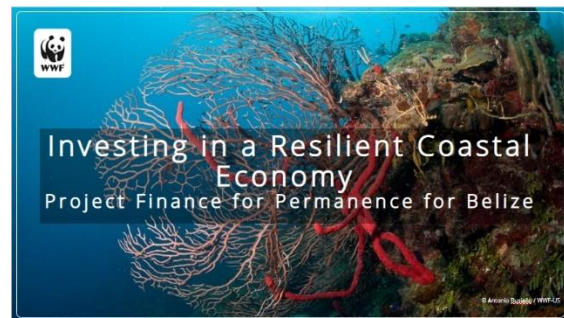
Areas identified for blue growth include both traditional sectors (the maritime sector (shipping, ports), tourism (cruise, yachting, beach/resorts), mineral and aggregate extraction, fisheries, and aquaculture, among others) and emerging sectors (the production of energy (renewables, storage, hydrogen, etc.), biopharma / bio technology. ecotourism, deep sea minerals, mariculture, and ecosystem services (both the existing and non-monetarized values). These are all potential areas within the Blue Space that are covered within the overarching Strategy.

INVESTING IN A RESILIENT COASTAL ECONOMY: PROJECT FINANCE FOR PERMANENCE FOR BELIZE

Osmany Salas

World Wildlife Fund

Belize Project for Permanence



The ‘Project for Finance Permanence’ (PFP) is an approach that secures important policy changes, and the funding necessary to meet agreed national goals in the long term, with the ultimate aim of achieving sustainability in five areas: Ecological, Social, Political, Organizational and Financial. A PFP is much more than just securing significant financing - it is equally about ensuring the durability of ecological and social systems and ensuring that there are the political commitments and institutional design needed for successful implementation. A PFP invests time in design up front, ensuring that once all commitments have been formally met at a single closing, the program has all the tools it needs to succeed from Day One. The World Wildlife Fund has been working in this area, and has seen an opportunity to bring its expertise to support the establishment of a PFP in Belize – to be the world’s first marine and coastal PFP initiative

The Belize Government has committed to investing in conserving the globally important ecosystems and natural resources critical for supporting livelihoods and providing climate change resilience. It signed an MoU at the UNCCC in 2021 with the World Wildlife Fund and The Nature Conservancy for developing the PFP, at a scale similar to Costa Rica Forever (US\$80 million), with synergies and alignment with the Blue Bond, and lodged in the Blue Bond and PFP Unit, in the Office of the Prime Minister. An important focus is on institutional arrangements and policy reforms, requiring political will for execution, to improve accountability and streamlining administrative and judicial processes. The financial model is structured with the Government contribution increasing over the full implementation time of the initiative, through a transition fund from donors, supported by an endowment that offers a sustained allotment for resources. All these funds need to be secured by the deal closure of the development phase by 2025, leading to the initiatives launch.

The PFP will focus primarily on marine and coastal habitats – starting with the MPA system, then expanding to coastal ecosystems - mangroves and seagrass, fisheries and finally addressing upstream ridge to reef watershed impacts as financial resources become available. It will be centred on climate and

nature-based solutions, in addition to biodiversity, climate change resilience and supporting local livelihoods, contributing towards Belize's path towards a green / blue economy.

Belizeans and the Government will lead the work over the next three years, defining the priorities for PFP and how it can best support the country, based on a single, unified measurable goal that aligns partner interests and reflects the high level national strategic priorities that the PFP will help achieve. This guides the formation of the conservation and financial plans, and governance framework and will be supported by the stakeholder engagement strategy to ensure inclusivity throughout the process. This is seen as a path that can support a green / blue path towards economic recovery for Belize.

GAME CHANGING FINANCE SOLUTIONS...FINDING A WAY TO MAKING MPAS WORK

Valdemar Andrade

Turneffe Atoll Sustainability Association

Belize has a natural resource-based economy, with the blue space contributing to tourism and fishing livelihoods. Turneffe Atoll Sustainability Association is the co-management partner for Turneffe Atoll Marine Reserve, established in 2012, and covering 325,412 acres (1,317 km²). Management is based on Enforcement, Education and Outreach, Science for Adaptive Management and Tourism. The challenge is to find the financing to support this work, especially in such a large MPA – it is expensive, but expense is relative to value. TAMR, in collaboration with the Turneffe Atoll Trust, has been able to quantify the value of Turneffe in terms of storm protection (Bz\$382.3 million), tourism expenditures (Bz\$151.16 million), Blue Carbon (Bz\$7.0 million) and its fishery (Bz\$5-7 million). The value of the Deep-Sea fishery is currently unknown.



MPA managers are expected to deliver certain outputs (biodiversity protection, maintenance of ecosystem services and socio-economic benefits), but are not yet even meeting basic management needs - MPAs in Belize and worldwide have inadequately secured budgets for basic management.... something that needs to be better known and understood. The reliance on short-term grants creates unpredictable cash flow and uncertainty for their capacity to sustain conservation actions – MPA managers need improved long-term sources of revenue. The project-based grants and project cycles increase uncertainty and reduces financial autonomy. There is no one solution – ‘one size does not fit all’.

TASA has been piloting a blended finance approach using a more entrepreneurial approach to MPA management and funding, using business approaches to conservation that have the potential to generate predictable, long-term sources of revenue to support the MPA management and deliver successful outputs and outcomes. This still includes the more traditional grants for specific activities, but extends to low-impact high value tourism with associated user fees for priority tourism products such as access to

The Wit dive site, underwater and terrestrial trails, visitor facilities and an effective mooring network, supported by stakeholder engagement and tourism partnership agreements, and can lead to additional income sources from merchandise and donations from Blue Talks. It also includes a mix of impact investments for capital expenditures in areas such as blue carbon – but all options need to be aligned with the protection and sustainable use mandates of the protected area. This can result in the creation of low-impact, high value products, allow for start-up capital and result in greater impacts, with a decreased dependency on grant funding and generation of unrestricted funds.

A Blended Finance approach such as this requires a high-capacity, high performance technical and business team – selected for their experience in their fields, not only in conservation. It requires a supportive Board of Directors, stakeholders and Government, and also supportive donors. It needs to be backed by effective branding and marketing aligned with the Ministry of Tourism and the Belize Tourism Board, and can result in successful generation of funds that reduces the financing required from the Government, while also supporting national development.

BLUE ECONOMY REGIONAL PROTOCOL: AN OPPORTUNITY TO ENHANCE REGIONAL, NATIONAL AND LOCAL COORDINATION TO IMPROVE A HEALTHY ENVIRONMENT AND LIVELIHOODS IN THE MAR

Carlos Rodriguez

*Marine Coastal -Marine and Safeguard Specialist
MAR2R Project Strategic Advisor*



The Regional Environmental Framework and Strategy, 2021-2025 (La Estrategia Regional Ambiental Marco (ERAM)), guides the work of the regional Central American Commission on the Environment and Development (Comision Centroamericana de Ambiente y Desarrollo; CCAD). It defines regional environmental priorities for Central America and the Dominican Republic, in line with national priorities, the Agenda 2030 and Sustainable Development Goals (SDGs), the Paris Climate Change Agreement, and the Regional Strategy for Climate Change developed as part of the Central American Integration System (Sistema de Integracion Centroamericana; SICA). The objective of ERAM is to promote the environmental integration of the region for the economic and social development of its peoples. With input from over 20 regional SICA partners, ERAM strengthens the integrated approach to harmonizing the regional environmental agenda with other complementary agendas such as agriculture, fisheries, health and energy, among others.

As part of the Agreements reached under the Blue Economy Summit in Roatan in 2019, it was recognized that there was a need for the region to transition towards more inclusive and sustainable economic models for the sustainable use of ocean resources. This Blue Economy approach requires the collaboration of Ministries of the environment, fisheries, agriculture, trade and finances to work together to develop

national plans centered on innovation and technology that are consistent with the regional priorities, and the international environmental dialogue.

The Regional Blue Economy Protocol takes a Ridge to Reef approach mandated by CCAD, and framed in regional policies and strategies. It is a collaborative effort that creates consensual guidelines for an inclusive blue economy, bringing private and public sector stakeholders together towards transitioning to sustainable ocean- and reef-based economies by strengthening governance and creating enabling conditions to position the Ridge-to-Reef approach to water, coastal, and marine resource management. It focuses on strategies that improve the quality of life of people and the integrity of ecosystems, while promoting responsible fishing, clean energy, and good practices in agriculture, tourism, and fishing. To strengthen this approach, the CCAD has defined three areas of work 1) The Regional Landscape Restoration Protocol based on the UN Decade of Ecosystem Restoration; 2) the Regional Blue Economy Protocol based on the Roatan Agreements, and 3) the Regional Protocol for the Harmonization of Wastewater Discharge Standards in the Mesoamerican Reef Ecoregion.

Among the important milestones that have been achieved to date as part of the development of an inclusive, sustainable and climate-resilient Blue Economy in the MAR region are: a Blue Economy Conceptual Framework, a baseline of existing regulations concerning Blue Economy in the region, regional capacity building through the establishment of a Blue Economy Leadership Team (BELT) and guidelines established by the protocol that provide basic building blocks that can be integrated into national strategies. This collaborative approach will strengthen the region's leadership in moving forward in overcoming barriers to reach a common language on blue economy, leading development of Blue Economies on the global stage.

QUESTION AND ANSWER SESSION 5

Question for V. Andrade, Turneffe Atoll Sustainability Association: While we understand the need for blended finance to support the conservation initiative and sustainable development, the fishery at TAMR requires serious attention as it relates to conch, enforcement, traps etc. As we speak certain fishers have not removed all their traps from the water. What is the medium to longer-term plan to ensure fishers can continue to harvest at TAMR sustainably and ensure that all users adhere to the regulations - particularly to the use of traps? *N. Martinez, Belize Federation of Fishers*

V. Andrade: The fishery at Turneffe is one of the most robust and intense fisheries, so with respect to that we have been tracking several inventories, including our lobster inventory work to ensure that fishers are taking their traps out of the water, and our teams have been working along with the Fisheries Department to ensure that those traps are being removed from the water. This is a perennial challenge, and speaks to why the financing is important, as this does require manpower, serious continued surveillance and enforcement. Moving forward, in our collaboration with the Fisheries Department, TASA would like to ensure that the majority of traps are taken out – as part of this initiative, TASA has so far tagged 50% of

the traps, and continues to work with the fishers to ensure that they comply with the regulations once the season is closed.

THEME 6: BMF INVESTMENTS: MEASURING IMPACT

Angeline Valentine

Project Officer, MAR Fund/BMF



In developing the Belize Marine Fund Investment Strategy, we identified the need to *provide long-term financial sustainability for addressing high-priority marine resources management and conservation issues in Belize for greater impact throughout the Mesoamerican Reef Ecoregion...* and defined the desired impact we wanted to achieve – *Improved status of marine resources in Belize, contributing towards increased health and resilience of the Mesoamerican reef, strengthening ecosystem services for the benefit of all stakeholders.*

One of the key things identified during the planning was the role, or niche, that the BMF should play, taking into consideration the roles of other funding partners on the ground and the work that they were doing – how could the BMF complement those bodies of work? BMF is seen as a consolidator – assisting co-management partners in meeting financial gaps, capitalizing on opportunities, improving financial sustainability and reducing reliance on grant funding. It would be positioned to be able to provide follow on support for building on successful initiatives supported by other funding partners. Since the launch of the BMF in 2019, it has supported 45 projects, investing over US\$1.3 million, and supporting 23 civil society organizations.

The three-year Strategy ran from 2019 to 2021, and was implemented through three grant programs: 1) strategic, targeted grants with a maximum grant ceiling of US\$45,000 (11 projects, US\$513,450); 2) small grants awarded through a specific call for proposals, with a maximum grant of \$30,000 (12 projects, US\$341,612); and small discretionary grants (10 projects, US\$20,750). This provided a total investment of US\$875,812 across 33 projects and 21 organizations over the three years. Grants need to be aligned with at least one of the three thematic areas of the Strategic Plan: 1) Effective Marine Protected Areas (18% of 2019–2021 total investments); 2) Reduced Pressures on the Marine Environment (49% of investments); and 3) Improved awareness and stewardship of the Belize Reef (33% of investments).

The BMF does not work in isolation, but collaborates with other funding partners to ensure grantees have access to the investments they need for output and outcome success. It has been able to provide and leverage support from a number of key partners, including the internal MAR Fund programs. Nationally,

the BMF collaborates closely with the donor partners on the ground – the Protected Areas Conservation Trust and the GEF Small Grants Program, as well as international funding partners – for example, the Summit Foundation.

BMF investments have provided opportunities for improved, **effective MPA management** through supporting, either as part of a funding partner collaboration or independently, the development of ten national planning strategies and tools, and through supporting management actions and strengthening management in more than 456,978 hectares of marine protected area, across thirteen marine protected areas in Belize.

BMF assists with work that is already ongoing and fills gaps where needed, providing catalytic funds that have allowed the grantees to complete work successfully on the ground. You have heard from a number of these partners over the last two days, with collaborative investments translating into a better understanding of the resilience potential of Belize’s protected areas and their adaptive capacity, innovation towards MPA sustainable financing, and looking how, as a collective, we can help partners to be more strategic in this area and look at opportunities that ensures the conservation and protection of the marine resources in the long term. We have also contributed to the inclusion of MPAs in the national management effectiveness assessment for Belize’s National Protected Areas System, demonstrating how small, targeted injections of funds into ongoing processes can create larger, national outputs. We have also fostered discussion between partners to become more collaborative across marine protected areas, sharing lessons learnt and partnering to access larger, seascape grant opportunities.

Under the theme of **reducing pressures**, BMF has been able to support work through targeted actions by grantee partners – the removal of 25,000 ft of destructive fishing gear from Belize’s waters, improving reef resilience through supporting continuation of the out-planting of coral colonies, the expansion of Sapodilla Cayes Marine Reserve, placing an additional 92,600 ha under protection as no-take area, and mobilizing monitoring for Stony Coral Tissue Loss Disease.

Under the third thematic area, **Improved awareness and stewardship of the reef**, supporting a national bi-sectoral work towards developing a branding and marketing of the reef, supporting key partnerships to ensure awareness activities are ongoing through opportunities such as Reef Week, and ensuring that Belizeans wishing to attend and represent Belize at international forums such as COP, and increasing awareness of Belize on the international platform. Support for initiatives such as the Reef Protectors Program, and supporting cross-gutting work and the development of strategic documents, and consistent report for continued collaboration for youth engagement.

The BMF Strategy outlines other roles that BMF can play – supporting scaling up and expansion, as well as support of income diversification opportunities that meet national and international demand, improving the enabling environment for impact investments and building supply chains for supporting investable projects, aligning well with other bodies of work being implemented in Belize under the MAR Fund umbrella and by other funding partners. BMF can continue to be an effective partner in marine resources management and continue having impact and contribution not only in Belize but across the

Mesoamerican Reef (MAR), benefitting marine resource management that translate to broader benefits across the region.

We thank partners for all the support that they have provided, to both the Ministry of Sustainable Development and Ministry of Blue Economy and Civil Aviation, thank you to the Chief Executive Officers for their opening remarks yesterday, and Nayari Diaz-Perez for opening the meeting today, our translators and our fellow funding partners.

CLOSING REMARKS

Janet Gibson

Chair

Belize Marine Fund Steering Committee



On behalf of the Belize Marine Fund Steering Committee, I thank all of you very much – the panellists for their great presentations, to our excellent moderator, Zoe, to the participants for their attention and questions, and to Angeline and her team, Isabel and Christian, for their thorough organizing of the Conference.

In addition, we are very thankful for the partnership and collaboration BMF has with PACT and the Government, and also many other partners. We also extend our sincere thanks to the Oak Foundation, which has so generously supported our work over the last several years.

Many of you will remember our first conference, held in October, 2019. Little did we know then the tumultuous couple of years we had ahead of us. Many of our partners had an incredibly difficult time implementing their projects and programs. However, as we have seen clearly at this conference, despite these constraints, impressive accomplishments have been achieved. This is a testimony to your resilience, creativity and hard work, for which we are very grateful.

We have also seen, as is often the case in crisis, that in addition to the losses and setbacks, there are also opportunities and valuable lessons learnt that make us stronger and hopefully better prepared to face the uncertainties of the future. I have been struck throughout these proceedings at the wealth of knowledge we have gained through our various projects, and how they have underscored the importance in assessing and sharing key results.

I sense an air of optimism that to me is such a wonderful feeling, and I hope this conference has added to this upbeat outlook. Based on the presentations and the brief but succinct question and answer sessions we had, I hope you all feel recharged with ideas for even greater projects and new collaborations that can be made that will lead to enhanced protection of our precious marine world.

I would like to leave you with a quote I read recently that really struck me...and that is...'*remember, nature doesn't need us, we need nature*'. A simple but powerful truth.

Many thanks again for making this a successful and productive meeting.

ANNEX ONE: PARTICIPANTS – DAY ONE

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