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Monitoring Progress Toward a Prosperous, Sustainable Future: Belize Final Report

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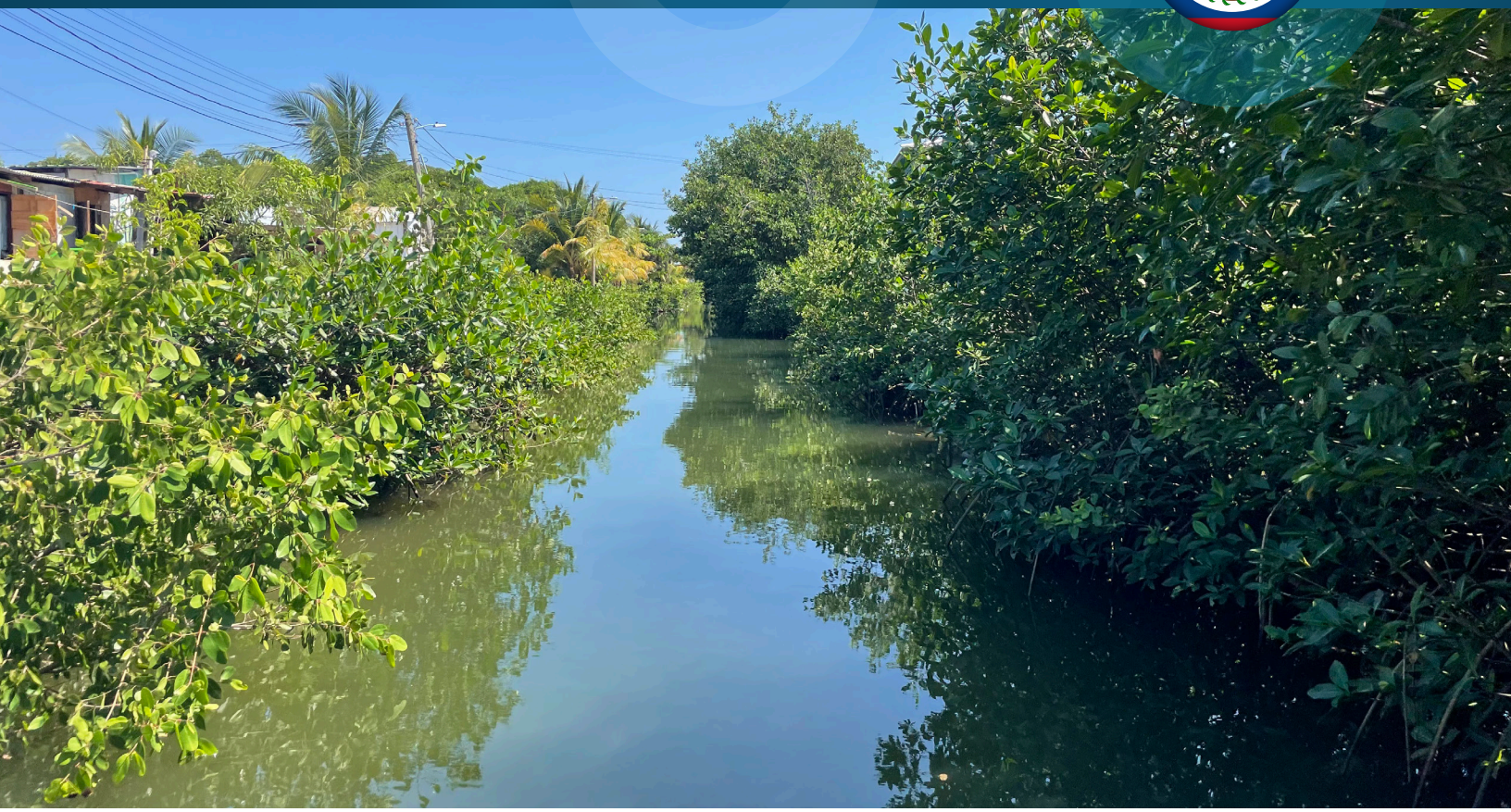
October 2025

Mainstreaming Nature in
Policy and Investment Decisions

Final Project Report
Monitoring Progress Toward a Prosperous, Sustainable Future

Belize



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Inside This Report

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This document outlines the activities and results of the Belize pilot project under the Regional Technical Cooperation (TC), "**Transforming Policy and Investment Through Mainstreaming Rapid Approaches for Natural Capital Assessment and Accounting**[1]." This TC was funded by the **Global Environmental Facility**[2] (GEF), implemented by the Inter-American Development Bank (IDB), and executed by Stanford University. The main beneficiaries and co-designers of this TC are Belize's Ministry of Blue Economy and Marine Conservation, the Belize Blue Bond Finance Permanence Unit, and the Ministry of Economic Transformation, and the technical work was led by the Natural Capital Project team (Stanford University). This project also received support from the Gordon and Betty Moore and a National Science Foundation grant (#2209284). Any opinions, findings, and conclusions or recommendations expressed in this material are those of the authors and do not necessarily reflect the views of the funders.

This project in Belize is also part of the People, Planet, Prosperity (3Ps) project[3], through the Stanford University-based Natural Capital Project collaborates with IDB, ADB, the World Bank through pilots in 16 countries to scale up the use of natural capital approaches around the world.

1 **Transforming Policy and Investment Through Mainstreaming Rapid Approaches for Natural Capital Assessment and Accounting**, 2023, Inter-American Development Bank.

2 **Transforming Policy and Investment Through Mainstreaming Rapid Approaches for Natural Capital Assessment and Accounting**, 2023, Global Environmental Facility.

3 **People, Planet, Prosperity: Mainstreaming Nature in Policy & Investment Decisions (Global)**, The Natural Capital Project, Stanford University.

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1. Executive Summary

Overview

Financial institutions and investors are increasingly adopting results-based financing mechanisms to align financial flows with desirable nature and biodiversity outcomes. At the same time, there is growing demand for a broader and more strategic set of people-centered targets (social key performance indicators, or KPIs) for these instruments, to support a just economic transition. Integrating both social and environmental key performance indicators into nature-positive, results-based finance frameworks enables stakeholders to more effectively measure, monitor, and manage the social and ecological impacts of their investments.

Belize has long been a leader in integrating natural capital approaches — quantifying nature's benefits to people — into policy and finance to support its coastal and ocean-based, or "blue" economy. However, like most countries, Belize currently lacks the comprehensive tools and institutional systems needed to measure and report on progress towards the social and environmental goals outlined in these results-based finance instruments. Without a clearly defined KPI framework and a science-based Measurement, Reporting and Verification (MRV) system, it is challenging to track progress, demonstrate results, and attract additional investment (see Glossary for terms). Addressing this gap is critical for Belize to fulfill its commitments under the Blue Bonds[4] and Project Finance for Permanence[5] (PFP).

This pilot brought together a transdisciplinary team, including local government agencies (the Blue Bond Finance Permanent Unit and the Ministry of Economic Transformation), WWF-Belize, the Inter-American Development Bank (IDB), and Stanford's Natural Capital Project (NatCap). Together, they worked to equip Belizean leaders with:

i) a KPI framework linking nature finance to socio-economic outcomes

ii) a monitoring tool (the Blue Economy Jobs survey) to track people-positive KPIs associated with Belize's blue economy, and

iii) a plan for creating a central platform (a "dashboard") for monitoring and sharing progress on KPIs from across Belize's blue economy sectors, in order to inform national policy and finance decision-making.

This pilot laid the foundation for scaling up MRV systems to measure and communicate the impacts of investments in Belize's blue economy, contributing to three key outcomes:

Policy advancement: Informing updates to Belize's Integrated Coastal Zone Management Plan (ICZMP) and the Belize Sustainable Ocean Plan (i.e., marine spatial plan), both central to its Blue Bonds commitments.

Finance and investment: Tracking progress toward people- and nature-positive goals under the country's Blue Bonds, Resilient Bold Belize program under the Project Finance for Permanence initiative, future results-based finance solutions such as IDB-led Blue Outcomes Fund (in preparation),[6] and others related to blue carbon and biodiversity credits.

4 The Nature Conservancy, **Belize Blue Bonds for Ocean Conservation Case Stud**y.

5 Project Finance for Permanence (PFP) is an approach or single initiative that secures important policy changes, and all funding necessary, to meet specific conservation goals of a program over a defined long-term timeframe, with the ultimate aim of achieving the ecological, social, political, organizational, and financial sustainability of that program. Cabrera, H. et al. 2021. **Securing Sustainable Financing For Conservation Areas: A Guide To Project Finance For Permanence**. Washington D.C. Amazon Sustainable Landscapes Program and WWF.

6 The Blue Outcomes Fund is a results-based financing instrument under development by the IDB to channel private capital toward marine and coastal conservation. Modeled after the Jaguar Impact Bond, the Fund aims to reward measurable environmental and socioeconomic outcomes in the blue economy. It will launch with a pilot in Belize, with potential for replication across the Caribbean region.

Capacity development: Engaging government agencies, multilateral development banks (MDBs), and regional stakeholders to enhance data-driven governance and adaptive management.

Building on the results of this pilot, as a next step Belize will develop and implement the Blue Economy MRV System,[7] executed by the Belize Blue Bonds Unit. This system will enhance data-driven decision-making, accountability, and transparency, ensuring that climate, social, and environmental KPIs inform nature finance, spatial planning, and national development strategies. This pilot provides a scalable model for other nations, reinforcing Belize's position as a global leader in blue economy resilience and nature finance innovation.

Glossary of Key Terms

Here, we use the following terminology:

Beneficiaries: The specific people, groups, sectors, or organizations that receive ecosystem services.[8]

Blue economy: The Blue economy refers to the sustainable use of ocean and coastal resources to drive economic growth, improve livelihoods, and enhance ecosystem health while ensuring the long-term resilience of marine environments. It encompasses industries such as fisheries, aquaculture, marine tourism, renewable ocean energy, coastal infrastructure, and blue carbon markets, all of which rely on maintaining healthy marine and coastal ecosystems.[9]

Blue carbon: Blue carbon refers to the carbon stored and sequestered by coastal and marine ecosystems, such as mangroves, seagrass meadows, and salt marshes. These ecosystems play a critical role in climate change mitigation by absorbing and storing large amounts of carbon dioxide (CO_2) from the atmosphere and ocean.[10] Unlike terrestrial forests, blue carbon ecosystems store carbon in both plant biomass and deep sediment layers, where it can remain locked away for centuries.[11] Protecting and restoring these ecosystems not only helps reduce greenhouse gas emissions but also enhances coastal resilience, supports biodiversity, and provides livelihood opportunities through blue carbon finance mechanisms, such as carbon credits and climate adaptation funding.[12]

Blue Economy Jobs: Blue economy jobs refer to sustainable jobs and economic activities that depend on healthy marine and coastal ecosystems while supporting local communities and conservation goals. These livelihoods include fisheries, aquaculture, marine tourism, seaweed farming, coastal restoration, and blue carbon initiatives.[13]

Ecosystem services: The material, spiritual, cultural, communal, and other benefits that ecosystems provide to people.[14]

Key performance indicators (KPIs): KPIs are specific, measurable, verifiable indicators that track progress toward nature-positive, social and economic benefits (i.e., people-positive) outcomes

7 IDB project: **Implementing a Blue Economy MRV System in Belize**

8 Rode J., et. al., 2016 **Ecosystem Service Opportunities: A Practice-Oriented Framework for Identifying Economic Instruments to Enhance Biodiversity and Human Livelihoods**, *Journal for Nature Conservation.*

9 World Bank, 2017. **What is the Blue Economy?**

10 NOAA, 2024. **Blue Carbon**

11 Ibid.

12 Schindler Murray, L., Milligan, B. et al. 2023. "**The Blue Carbon Handbook: Blue Carbon as a Nature-Based Solution for Climate Action and Sustainable Development**." Report. London: High Level Panel for a Sustainable Ocean Economy.

13 World Bank, 2022. **Jobs and Livelihoods in the Blue Economy**

14 Millennium Ecosystem Assessment, 2005. **Ecosystems and Human Well-being: Synthesis**. Island Press, Washington, DC.

and are subject to reporting.[15] For example, hectares of restored mangroves, improved coastal livelihoods, or reduced greenhouse gas emissions.

Natural capital: The Earth's natural assets – its lands, waters, and biodiversity – upon which all life depends. "Blue" natural capital refers specifically to ocean and coastal assets.[16]

Natural capital accounting: Natural capital accounting measures stocks of natural assets and the flows of ecosystem services they provide to society in monetary and/or biophysical terms, often aggregating this information nationally or regionally using a standardized, replicable approach that allows for monitoring change over time. This is helpful for designing, monitoring, and evaluating policies and investments.[17]

Natural capital approaches: Approaches that make explicit nature's benefits to people so they can be incorporated into decisions and can motivate investments in ecosystems, improving the well-being of both people and nature. This includes both natural capital assessments and accounting.[18]

Natural capital assessments: Through close engagement with decision-makers, local experts, and stakeholders, natural capital assessments quantify and map both natural capital stocks (e.g., water-purifying wetlands) and the ecosystem services flowing to people (e.g., safe drinking water) to provide quantifiable — and often, spatially explicit — metrics of those services, whether monetary, biophysical, or social/cultural. A "rapid" assessment here refers to an assessment involving less local data collection and stakeholder engagement than other more in-depth, long-term efforts.[19]

Measurement, Reporting, and Verification (MRV): MRV is the multi-step process of measuring KPI performance, documenting progress, and validating results—typically through independent third-party verification—to enable financial disbursement or impact certification.[20]

2. Introduction

Financial institutions and investors are increasingly adopting results-based finance solutions to align financial flows with desirable nature and biodiversity outcomes. Instruments such as **blue bonds**[21] and **Project Finance for Permanence**[22] (PFP) agreements offer structured approaches that link investment to measurable results. Blue bonds, for instance, raise capital for initiatives that improve ocean health, enhance coastal resilience, and promote sustainable blue economies. PFP agreements pool upfront long-term funding that is disbursed in phases contingent on achieving environmental, social, and governance milestones—such as supporting effective Marine Protected Areas (MPAs) and restoring degraded

15 ISDA, 2021. **Sustainability-linked Derivatives: KPI Guidelines**

16 Convention on Biological Diversity, 2021. **Natural Capital**

17 System of Environmental Economic Accounting, 2025. **Natural Capital and Ecosystem Services FAQ**

18 Natural Capital Coalition, 2019. **What is a Natural Capital Approach?**

19 The Natural Capital Project, Stanford University, 2024. **Natural Capital Assessments & Accounting**

20 World Bank, 2022. **What You Need to Know About the Measurement, Reporting, and Verification (MRV) of Carbon Credits**

21 International Finance Corporation, 2022, **Guidelines for Blue Finance**

22 Cabrera, H. et al., 2021. **Securing Sustainable Financing For Conservation Areas: A Guide To Project Finance For Permanence**. Washington D.C. Amazon Sustainable Landscapes Program and WWF.

ecosystems. In all results-based finance solutions, robust KPI frameworks and science-based MRV systems are critical to demonstrate progress and unlock successive tranches of funding.

Results-Based Finance is a financing model in which funds are disbursed only upon the achievement of predefined, independently verified outcomes, and in which financial terms are adjusted depending on whether KPIs are achieved. This approach enhances transparency and accountability and ensures that investments lead to measurable outcomes (in this case, environmental and socio-economic results) sought by the investors. Results-based finance instruments include Sustainability-Linked Bonds/Loans, and Social Impact Bonds. In the case of Green, Blue, Social, or Sustainability Bonds, the funds are earmarked for specific projects (use-of-proceeds) and are not necessarily tied to performance.

A review of best practices for evaluating MPA management effectiveness reveals that most current approaches emphasize biophysical monitoring — particularly of coral and fish health — while giving less attention to human community outcomes.[23] To address these imbalance gaps, there is a need to shift toward outcome-based, science-driven monitoring frameworks that assess the effectiveness of MPAs against established baselines using both biophysical and socio-economic indicators. This integrated approach would provide a more comprehensive understanding of MPA performance and its contributions to the broader goals of a sustainable blue economy strategy.

At the same time, there is increasing demand from investors, companies, and society for a broader, more strategic set of social KPIs to support a just blue economy.[24] Without clearly defined social KPIs, businesses risk reinforcing harmful practices and missing opportunities to improve labor conditions, promote inclusion of women and Indigenous communities, and ensure equitable local benefit-sharing. Their absence can hinder progress in economic development, transparency, and inclusive governance. In contrast, integrating social KPIs into results-based finance frameworks, especially those aligned with nature-positive outcomes, enables companies and investors to more effectively measure and manage social impacts, track progress toward environmental, social, and governance (ESG) goals, and enhance reporting. This integrated approach supports alignment of private sector activities with global equity principles and accelerates progress toward the Sustainable Development Goals (SDGs).

Belize, a Small Island Developing State[25] in the Mesoamerican Reef region, has emerged as a global leader in leveraging natural capital approaches[26] for sustainable development. From the creation of its Integrated Coastal Zone Management Plan (ICZMP)[27] to the launch of its landmark Blue Bonds[28] in 2021 and its new Resilient Bold Belize Project Finance for Permanence (RBB PFP)[29] initiative, Belize has combined policy innovation with financial ingenuity to secure long-term protection for its marine ecosystems, including mangroves, coral reefs, and seagrasses, and for sustained economic and societal benefit. For more on the Blue Bonds and the RBB PFP, see Table 1 and “Deeper Dives” on page 7.

Natural capital approaches make explicit nature’s benefits to people so they can be incorporated

23 **Recommendations on Methodology for Monitoring the Effectiveness of MPA Management**, 2003. Conservation and Sustainable Use of the Mesoamerican Barrier Reef Systems Project.

24 **Development of Social KPIs for the Financing of a Blue Economy in the Caribbean**, 2025. Inter-American Development Bank.

25 **UN List of Small Island Developing States**

26 The Natural Capital Project, Stanford University, 2024. **Natural Capital Assessments & Accounting**

27 **Belize Integrated Coastal Zone Management Plan**, 2016, and **Interim Belize Integrated Coastal Zone Management Plan**, updated, 2021

28 The Nature Conservancy, **Belize Blue Bonds for Ocean Conservation Case Study**.

29 **Resilient Bold Belize Project Finance for Permanence, WWF-GEF**

into decisions and motivate investments in ecosystems, improving the well-being of both people and nature. This includes both natural capital assessments and accounting.

Through the issuance of its Blue Bonds, the country restructured a portion of its national debt in exchange for marine conservation commitments. Similarly, through the RBB PFP, the country is mobilizing over $100 million for the long-term protection of its marine and coastal ecosystems, restoration of critical habitats, and enhancement of sustainable livelihoods. These efforts have led to the successful removal of Belize's portion of the Mesoamerican Reef from the UNESCO's "Reefs at Risk" list. Moreover, the country has become a benchmark for the use of innovative financial instruments to promote a resilient, nature-positive, and inclusive blue economy.

However, like most countries, Belize currently lacks the comprehensive tools and institutional systems needed to measure and report on progress towards the social and environmental goals outlined in these results-based finance instruments. Without a clearly defined KPI framework and a science-based MRV system, it is challenging to track progress, demonstrate results, and attract additional investment. Addressing this gap is critical for Belize to fulfill its commitments under the Blue Bonds and PFP. The current pilot project began addressing this need through the work of a transdisciplinary team that included local government agencies (the Blue Bonds Finance Permanent Unit and the Ministry of Economic Transformation), WWF-Belize, the Inter-American Development Bank (IDB), and Stanford's Natural Capital Project (NatCap).

This pilot project established a foundation for tracking Belize's progress toward its national and global commitments. For KPIs to be useful to both policy and investment decision-making, they should align with international frameworks as well as the country's institutional capacity. By developing a coherent KPI framework for a forthcoming MRV system that links social, economic, and nature-based outcomes to results-based finance, Belize aims to deliver measurable, verifiable benefits for both people and nature, an achievement that will strengthen the country's leadership in sustainable ocean and coastal management.

The pilot had three objectives:

1. Define a framework of KPIs to track social and nature-positive outcomes of results-based finance.

2. Assess existing monitoring approaches and develop a science-based monitoring method to track social KPIs.

3. Develop a plan for an MRV system and determine actors responsible for its long-term implementation.

Study area

Located on the eastern coast of Central America, Belize is a biodiversity-rich country that forms part of the Mesoamerican Reef — the second-largest coral reef system in the world. Covering 23,000 km² and bordered by Mexico, Guatemala, and the Caribbean Sea, Belize is home to about 400,000 people, including Mestizo, Creole, Maya, and Garifuna ethnicities. Its extensive coastal ecosystems, which include mangroves, seagrass meadows, and offshore atolls, play a vital role in supporting marine biodiversity, protecting shorelines, and storing blue carbon for climate mitigation (Figure 1).

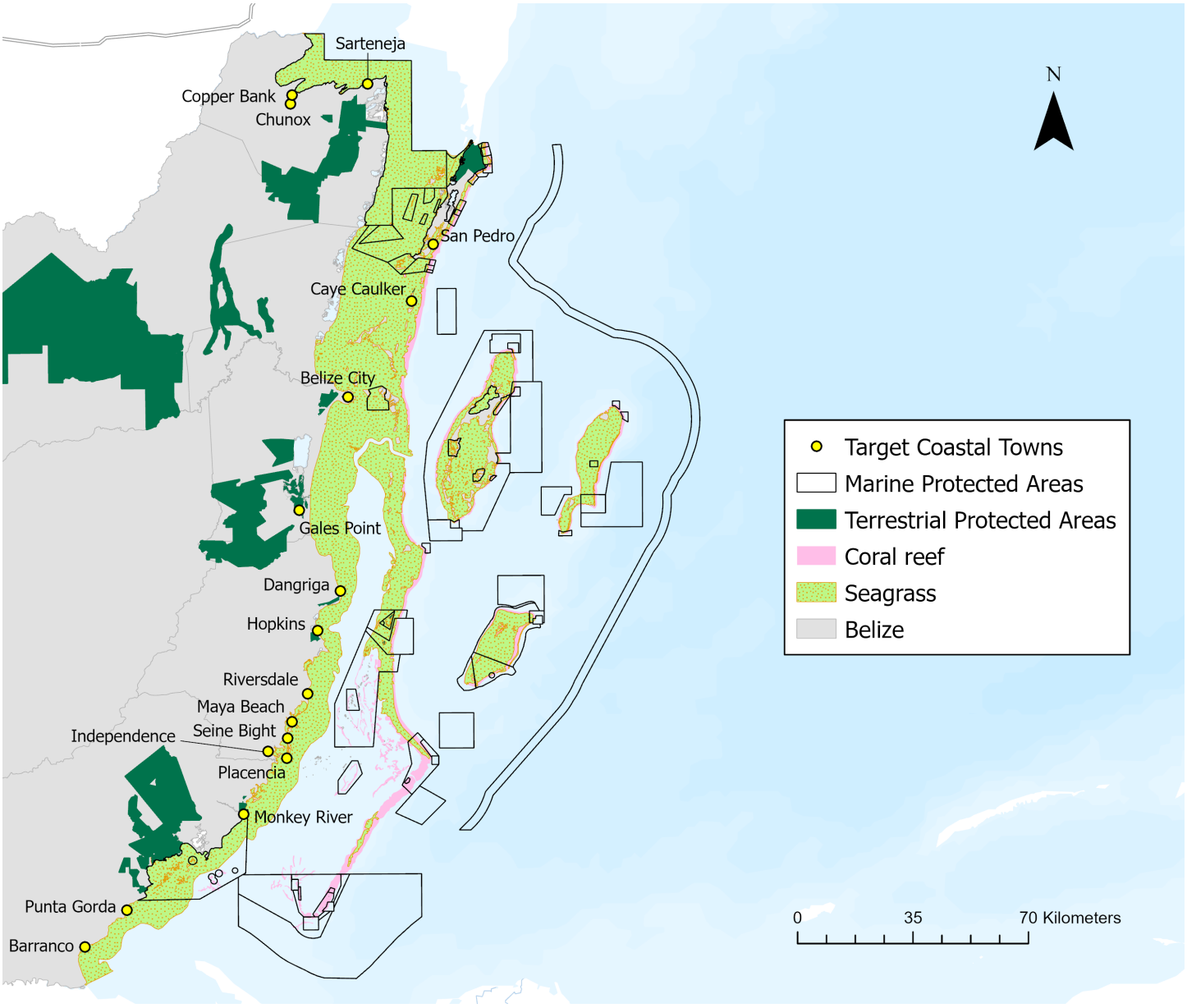

Figure 1: Study area map of Belize with coastal and marine protected areas.

Coastal and marine ecosystem services are central to Belize's economy, particularly through tourism and small-scale fisheries. These ecosystems also sustain Indigenous and local cultural practices. For example, Hol Chan Marine Reserve attracts thousands of tourists annually, supporting local tour operators and businesses, while traditional fishing communities in Seine Bight and Punta Gorda rely on sustainably managed fisheries, passing down centuries-old knowledge that is integral to Belize's coastal identity.

Despite its natural wealth, Belize faces environmental pressures including sea level rise, coral bleaching, overfishing, coastal development, agricultural runoff, and plastic pollution. The economy's heavy reliance on natural capital, particularly through tourism, fisheries, and agriculture, makes it vulnerable to environmental degradation, climate change, global market shocks, and crises like COVID-19, which severely disrupted livelihoods. Building resilience and fostering an economy based on sustainable natural resource management are critical to enhancing long-term economic stability and community adaptability.

Deeper Dive: The Blue Bonds and the Belize Sustainable Ocean Plan

The Belize Blue Bonds, a debt-for-nature conversion, were issued in November 2021 through a collaboration between the government of Belize, The Nature Conservancy (TNC), and the U.S. International Development Finance Corporation (DFC). Facilitated by Credit Suisse, the deal enabled Belize to repurchase US$553 million of its external debt (the "Superbond") at a 45% discount, financed through a US$364 million Blue Loan. This transaction resulted in an estimated US$189 million reduction in debt stock and generated $180 million in funding for conservation over 20 years, composed of annual cash flow from the government and an endowment that was capitalized at financial close.[30] The main conservation financing streams are managed through the Belize Fund for a Sustainable Future, which includes a US$23.5 million pre-funded endowment, predicted to grow to US$92 million and annual average disbursements of US$4.2 million over the next 20 years. Running through 2041, implementation of the conservation commitments began immediately following the agreement, such as the expansion of MPAs to 30% of Belize's ocean/coastal areas, and the rollout of the Belize Sustainable Ocean Plan[31] under the leadership of the Coastal Zone Management Authority and Institute (CZMAI) and the Belize Fisheries Department.

As part of the agreement, Belize committed to a series of marine conservation milestones, including protecting up to 30% of its ocean by 2026 and completing a participatory Marine Spatial Plan. These funds support marine protection, marine protected area expansion, and the rollout of the Belize Sustainable Ocean Plan, led by CZMAI and the Belize Fisheries Department. Building on the country's Integrated Coastal Zone Management Plan, the Belize Sustainable Ocean Plan combines spatial planning with fisheries management, sustainable tourism, and ecosystem protection while supporting national socio-economic priorities.

Deeper Dive: Resilient Bold Belize and the Project Finance for Permanence (RBB PFP)

Building on the goals of the Blue Bonds, the Resilient Bold Belize[32] program is structured as a PFP agreement — an innovative and holistic results-based finance model designed to secure long-term protection for both marine and terrestrial ecosystems. The RBB PFP was formally announced in early 2024, following more than two years of collaborative design. It brings together a coalition of partners, including the government of Belize, WWF (Belize and global offices), the Blue Action Fund,[33] and the Global Environment Facility[34] (GEF), coordinated by the Enduring Earth[35] partnership.

The initiative is expected to mobilize over US$100 million to support the permanent protection of 30% of Belize's marine areas as stipulated in the Blue Bonds agreement, as well as coastal areas surrounding MPAs, the restoration of critical degraded habitats, and improvement of livelihoods. Funds are disbursed in phases, contingent on achieving clearly defined conservation, policy, and governance milestones. As with all PFPs, implementation is grounded in nine essential components, including a co-developed conservation plan, a long-term financial model, a multi-stakeholder governance structure, and a robust MRV system. The RBB PFP is designed to be implemented over a 10-year horizon (2024–2034), with sustainability and permanence built in through increasing government co-financing and local ownership.

30 TNC, 2022. **Case Study – Belize Blue Bonds for Ocean Conservation**
31 **Belize Sustainable Ocean Plan**
32 **Resilient Bold Belize Program**
33 **Blue Action Fund**
34 **Belize receives CEO endorsement from the Global Environment Facility, Caribbean News Global**.
35 **Enduring Earth Partnership**

Table 1: Overview of the Belize Blue Bonds and the Resilient Bold Belize Project Finance for Permanence

Feature	Belize Blue Bonds	Resilient Bold Belize
Instrument type	Debt-for-Nature Swap, Debt Refinancing	Project Finance for Permanence (PFP)
Launch year	2021	Expected 2025 (in preparation since 2022)
Lead partners	Government of Belize, The Nature Conservancy, DFC	Government of Belize, WWF, Blue Action Fund, Enduring Earth, and GEF
Primary focus	Debt reduction and marine conservation	Protection of marine and coastal ecosystems
Financing mechanism	Debt refinancing mechanism	Blended public/private finance
Total funding	US$364 million Blue Loan; US$23.5M pre-funded endowment + $4.2M in annual funding for conservation	Estimated to mobilize US$100+ million (Transition Fund), with about 30-35% already secured.
Disbursement approach	The Belize Fund disburses 40% of funds to the Government of Belize through the Government Strategic Allocation and at least 40% to NGOs, academia, and local communities through a competitive Grant Awards Program.	Phased disbursement based on verified milestones
Link to marine protection	Protect up to 30% and improve the management of coastal and marine ecosystems	Protect 30% marine and 50% forest areas permanently
Results-based finance model	Failure to achieve milestones does result in penalty payments	Full model with verified results triggering disbursement
Governance structure	Belize Fund for a Sustainable Future	National-level conservation trust structure to be defined
Relation to KPIs and MRV	KPIs from this study will be used in the reporting for the Belize Sustainable Ocean Plan, ICZMP, Blue Economy indicators	KPIs and MRV co-developed to track conservation and socioeconomic outcomes
Implementation timeline	Implementation Timeline: 2021-2041 — Disbursements run in parallel with the loan repayment over 20 years after which the endowment will replicate the same cash flow into the future (long-term).	2025-2035 spend Transition Funds and leverage sustainable financing mechanisms beyond (long-term).

3. Process & Methodology

Using a natural capital approach involves an iterative process of engagement and consultation with a range of people and sectors. At each stage, different types and levels of engagement may be needed. In general, these engagement processes are an effective way to incorporate reliable scientific information as part of good governance carried out by governments, NGOs, civil society, and multilateral development banks. It is critical that at least one, but ideally more, of those engaged become true local champions of this work, bringing their connections and influence to bear and investing themselves in the long-term success of the work. The engagement process is based on mutually respectful relationship-building and clearly defined timelines and objectives, including, in many cases, cross-cultural exchange and learning, which takes time but is often rewarding and meaningful in innumerable ways.

Each institution on the integrated pilot project team played a unique and vital role. IDB provided strategic guidance on opportunities for results-based finance, with an emphasis on defining KPIs and building a robust MRV system. Local government partners were instrumental in aligning the project with national priorities, supporting decision-making, facilitating access to relevant datasets, and coordinating engagement with other stakeholders. Civil society organizations helped bridge knowledge gaps, while the NatCap team brought expertise in natural capital approaches, data modeling, and capacity development.

The team engaged numerous local actors to define a framework of KPIs and an MRV system adapted to the Belize blue economy, including:

12 government agencies: (1) Statistical Institute of Belize, (2) Coastal Zone Management Authority and Institute, (3) Ministry of Blue Economy and Marine Conservation, (4) Belize Tourism Board, (5) Ministry of Sustainable Development, Climate Change, and Solid Waste Management, (6) Belize Fisheries Department, (7) Belize Forestry Department, (8) National Climate Change Office, (9) Environmental and Social Safeguards, (10) Belize Conservation Trust Fund;

4 local NGOs: (1) Belize and Global chapters of The Nature Conservancy, (2) Fragments of Hope, (3) Healthy Reefs for Healthy People, and (4) Belize Maya Forest Trust;

2 research institutions: (1) University of Belize and (2) Galen University;

4 consulting firms or consultants: (1) Global Ocean Accounting Partnership, (2) Nick Lambert Associate International, (3) Jaramar Villarreal Rosas (contracted by WWF Belize), (4) Tira Greene.

Sections 3.1-3.3 provide overviews of the methods used for each key step in the project.

3.1. Development of a social and environmental KPIs framework

The team developed a comprehensive KPI framework aligned with the conservation and financial milestones and commitments from both the Belize Blue Bonds and the RBB PFP. The framework integrates universal and sector-specific KPIs relevant to Belize's blue economy, focusing on key sectors such as tourism, conservation, fisheries, and climate resilience. KPIs related to governance, inclusiveness and gender equality were also incorporated to support cross-sectoral coordination and accountability. The KPIs primarily target social, economic, and environmental outcomes, providing a structured approach to track progress toward results-based finance milestones and sustainable blue economy goals.

To inform the framework, the team identified best practices and gaps in existing KPIs used across social, economic, governance, and environmental results-based finance and blue economy initiatives.[36] The team also reviewed relevant natural capital assessments, including the 2021 Belize NDC targets[37] and the 2016 Integrated Coastal Zone Management Plan,[38] as well as recent valuations of coastal and marine ecosystems,[39] which further informed the development of time-bound, sector-specific KPIs.

To ensure local knowledge and priorities were integrated into the work, the team engaged Belizean government agencies and NGOs through virtual meetings and a workshop held in Belize City in January 2024. The workshop participants helped identify existing KPIs, proposed new ones, mapped actors leading monitoring efforts, and discussed characteristics of an effective MRV system. This workshop was a key moment in building a shared vision for integrating social and environmental KPIs into Belize's national blue economy strategy. Key participants were further consulted through follow-up virtual sessions to refine the list of KPIs included in the framework.

Finally, to ground the framework in international best practices, the team convened at the global People, Planet, Prosperity Forum at Stanford University in June 2024. Feedback from international practitioners helped validate the relevance of selected KPIs, emphasizing the inclusion of social metrics within nature-positive targets (e.g., 30x30)[40] and informing the development of science-based MRV systems aligned with global results-based finance standards.

3.2. Development of a science-based monitoring tool for social KPIs linked to the RBB PFP

The team developed a science-based monitoring tool to track key social KPIs aligned with the goals of the RBB PFP. This was informed by a review of Belizean and international monitoring efforts that assess socio-economic and livelihood-related outcomes linked to blue natural capital. Sources included natural capital assessments, household surveys, tourism and fisheries indicators, and community-led data collection initiatives. The review helped identify opportunities to leverage or adapt existing approaches to meet the MRV requirements under results-based finance instruments such as a PFP.

Building on this review, the team outlined a sampling strategy to ensure representative, cost-effective data collection, and created a Terms of Reference (ToR) document to guide future deployment of the monitoring tool. This approach provides a structured pathway to track how results-based finance supports people-positive outcomes and reinforces the accountability and transparency principles that underpin the PFP model.

3.3. Development of the foundations for a forthcoming centralized MRV system

The team identified the need for a digital dashboard to monitor priority KPIs that are aligned with the country's finance commitments. Next, through a series of consultations and iterative feedback sessions, the team identified dashboard features and attributes that would be most useful for policymakers, investors, and implementing agencies. Finally, the team developed the plan for this platform — tentatively named BluePulse — that aims to ensure the dashboard is both technically robust and responsive to Belize's policy, finance, and reporting priorities.

36 IDB 2024, **Development of Social KPIs for the Financing of a Blue Economy in the Caribbean**, McClean et al. 2024, **Developing social and economic monitoring and evaluation systems in Indonesian tuna fisheries to assess potential impacts of alternative management measures on vulnerable communities**, ORRAA 2022, **ORRAA INDICATOR GUIDANCE**, UNEP-FI 2024, **Setting Sail: Target Setting in the Sustainable Blue Economy**, ICMA 2024, **Sustainability-Linked Bond Principles**, Belize Forestry Department 2024, **Overview of the Forest Sector Measurement, Reporting, and Verification Processes**, WEF 2024, **Biodiversity Credits: Demystifying Metrics for Nature Markets**

37 Arkema, K., et al. 2023. **Evidence-Based Target Setting Forms Blue Carbon Strategies for Nationally Determined Contributions**. Nature Ecology and Evolution.

38 Arkema, K., et al. 2015, **Embedding Ecosystem Services in Coastal Planning Leads to Better Outcomes for People and Nature**. PNAS.

39 Morrissette, H., et al., 2023. **Belize Blue Carbon: Establishing a National Carbon Stock Estimate for Mangrove Ecosystems**. Science of the Total Environment.
Cooper, E., 2009. **Coastal Capital: Belize the Economic Contribution of Belize's Coral Reefs and Mangroves**. World Resources Institute.

40 The Kunming-Montreal Global Biodiversity Framework, 2022; **2030 Targets**, Convention on Biological Diversity.

4. Technical Results

4.1 The framework for social and environmental KPIs

The KPIs developed include four main characteristics: i) link sustainable fisheries to food security and livelihoods, ii) track eco-tourism contributions to conservation financing; iii) support Belize's climate mitigation and adaptation, including blue carbon finance and the Nationally Determined Contributions (NDCs), and iv) promote inclusive governance and community benefit-sharing.

Appendix 1 presents the full suite of KPIs identified through methods described in section 3.1. The KPIs were grouped by key sectors of Belize's blue economy, including fisheries, tourism, climate resilience, conservation, and governance, and categorized as social, economic, or environmental. The framework includes 9 economic KPIs, 16 social KPIs, and 9 environmental KPIs.

4.2 The monitoring tool to track for social KPIs linked to RBB PFP

The team developed the Blue Economy Jobs monitoring survey to assess how results-based finance can help with creating and enhancing livelihoods. This survey tool can help set up a baseline for characterizing blue economy-based livelihoods in Belize, track changes in social KPIs related to livelihoods, and provide pathways toward an equitable and nature-centered workforce.[41]

The survey tool focused on monitoring the following livelihoods categories:

Fisheries differentiated by gear use and management practices (lobster, conch, finfish)

Tourism-related activities such as wildlife watching, day tours (diving and snorkeling), fly fishing, boat captain licensing, dive certification, and hospitality (hotel-based jobs).

Seaweed cultivation activities such as harvesting, processing, and marketing of seaweed products

Small business enterprises particularly those involved in directly marketing commercial fish species, lionfish, and conch products (for consumption and jewelry) to the tourism sector

Trade-related activities such as repair training for boats, engines, and air conditioning systems

Restoration and MPA-related activities such as environmental monitoring of corals, mangroves, and seagrasses as well as marine park ranger training

41 **Decent Work in Nature-Based Solutions**, 2022. International Labour Organization, UN Environment Programme, and International Union for Conservation of Nature Joint Report.

These livelihoods have been prioritized by communities in recent stakeholder workshops[42] and support concurrent efforts to improve livelihoods within the RBB PFP.[43]

The monitoring survey corresponding to the proposed KPIs is presented in Appendix 2, along with a framework for its application across 17 sites targeting 640 individuals or households (see Figure 1). These sites were selected based on previous livelihood interventions and consultations with project partners (see Deploying Blue Economy Jobs monitoring ToR, Appendix 3).

4.3 A conceptual framework for a centralized dashboard to track KPIs

The team outlined plans for a dashboard (again, tentatively named BluePulse) which, when developed, will integrate cross-sectoral data relevant to blue economy growth and results-based finance, centralizing and updating data through semi-automated workflows. For instance, key departments already collecting social and environmental KPIs — including fisheries, tourism, coastal management, and climate offices — could feed data into this unified dashboard. The Statistical Institute of Belize (SIB) may serve as the managing institution, promoting data-driven insights and supporting stronger cross-sectoral governance (Figure 2).

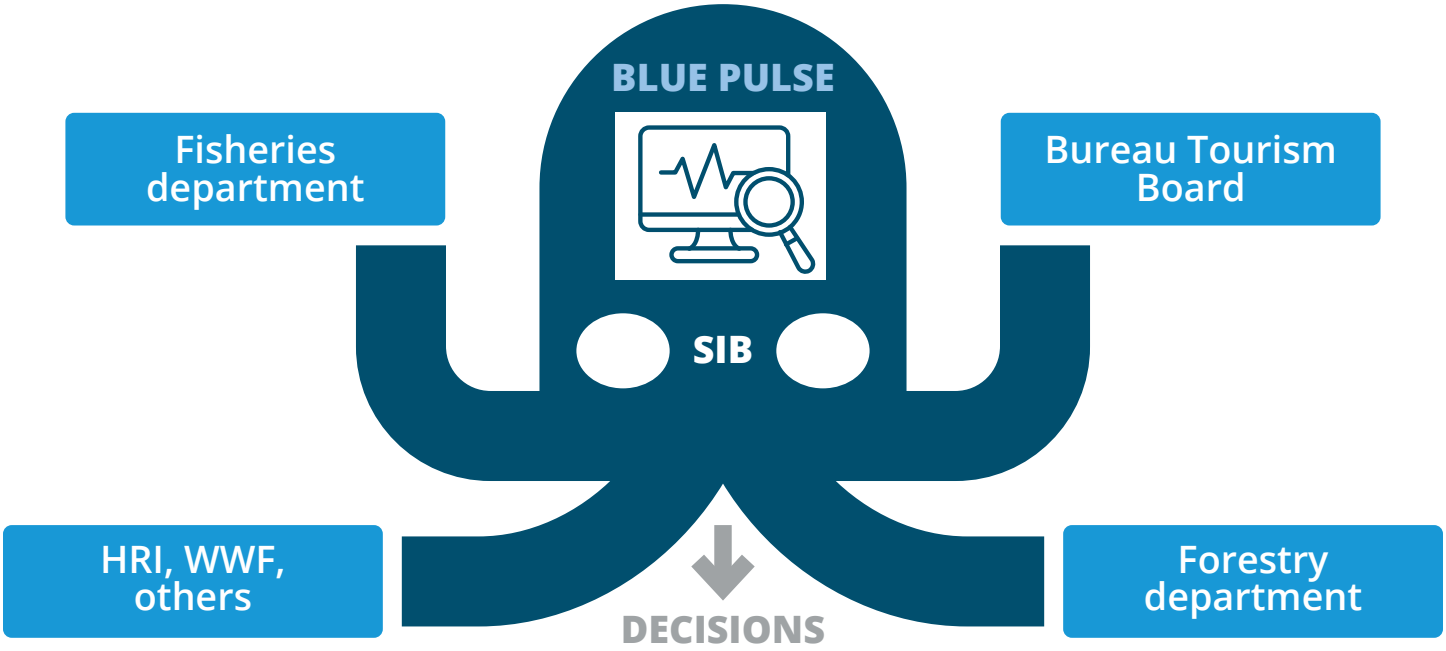

Figure 2: Key actors contribute to a centralized dashboard, enabling informed decision-making across sectors

42 Singh 2022, **Vulnerability and Livelihood Assessment of the Coastal Zone and Fisheries Sector of Belize**, Prepared for the United Nations Food and Agricultural Organisation.

43 **Reef Guard Project: Sustaining Life and Livelihoods**, 2024, WWF.

The following core needs and objectives for the dashboard were identified during the consultation process:

- Practicality and transparency. The dashboard should enable cost-effective, routine cross-agency data sharing, improving collaboration across key blue economy sectors (Figure 2).
- Centralization of KPIs – social, economic, and environmental – relevant to Belize's sustainable blue economy (Figures 3 and 4).
- Progress tracking: use of scorecards to monitor progress towards results-based finance targets, and to inform updates to the Belize Sustainable Ocean Plan and Integrated Coastal Zone Management Plan (Figure 5).
- User-friendly analytics: allow users to filter and disaggregate data by region, sector, and time period through simple, intuitive visualizations, supporting trend analysis and adaptive management (Figures 4-5).

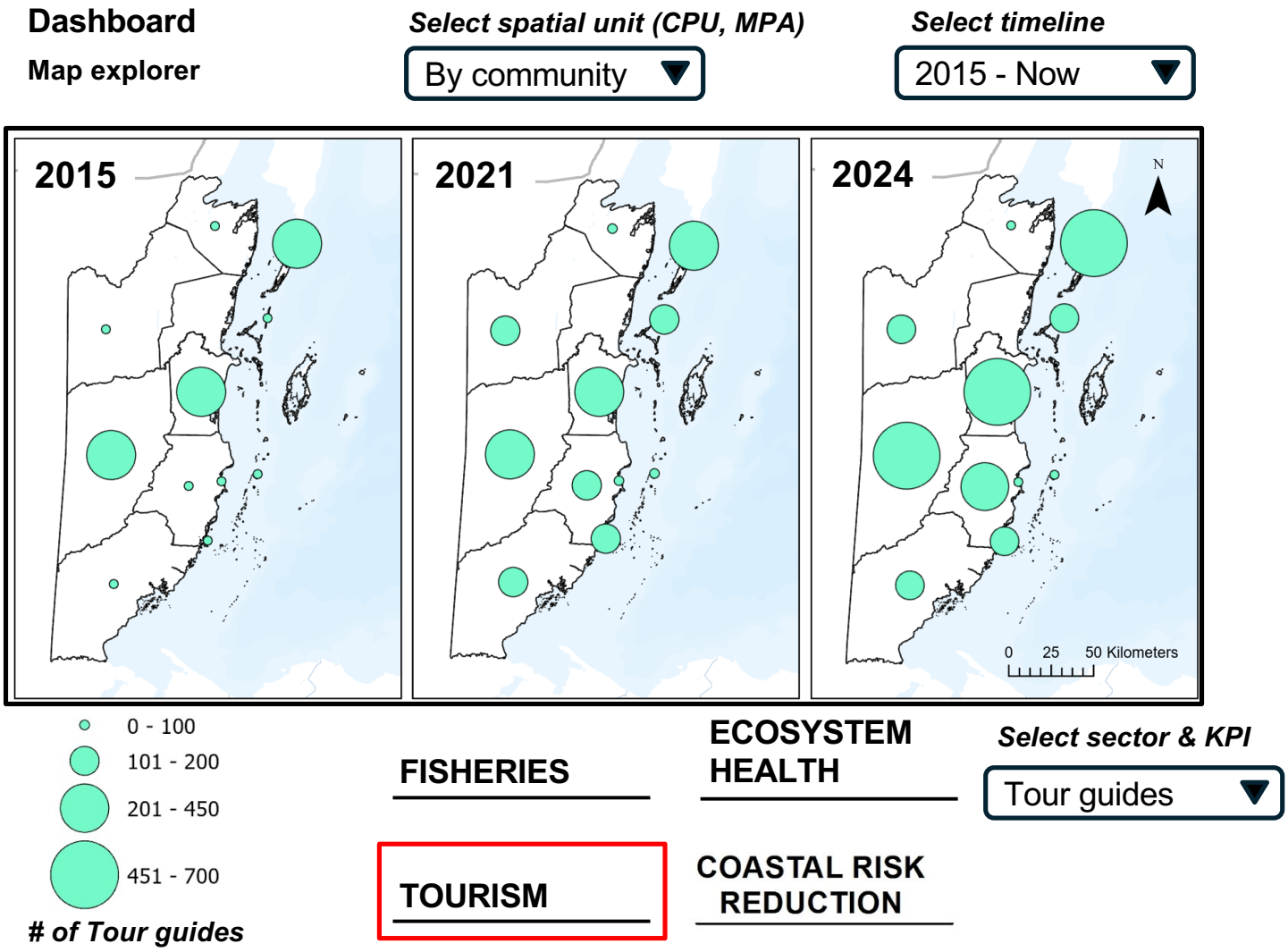

Figure 3: Map explorer component of the dashboard showing social KPIs related to tourism

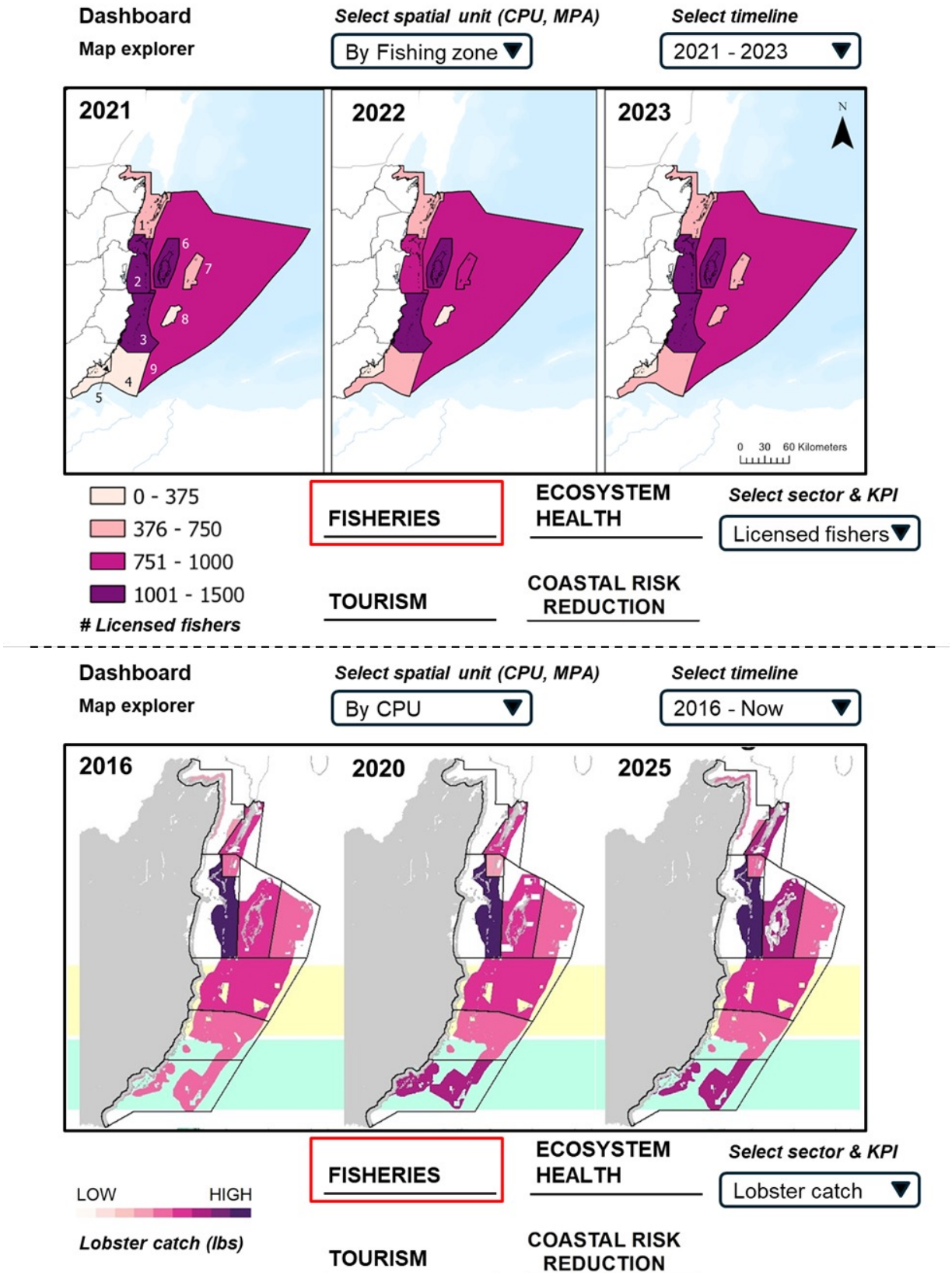

Figure 4: Map explorer component of the dashboard showing social, finance, and environmental KPIs related to fisheries

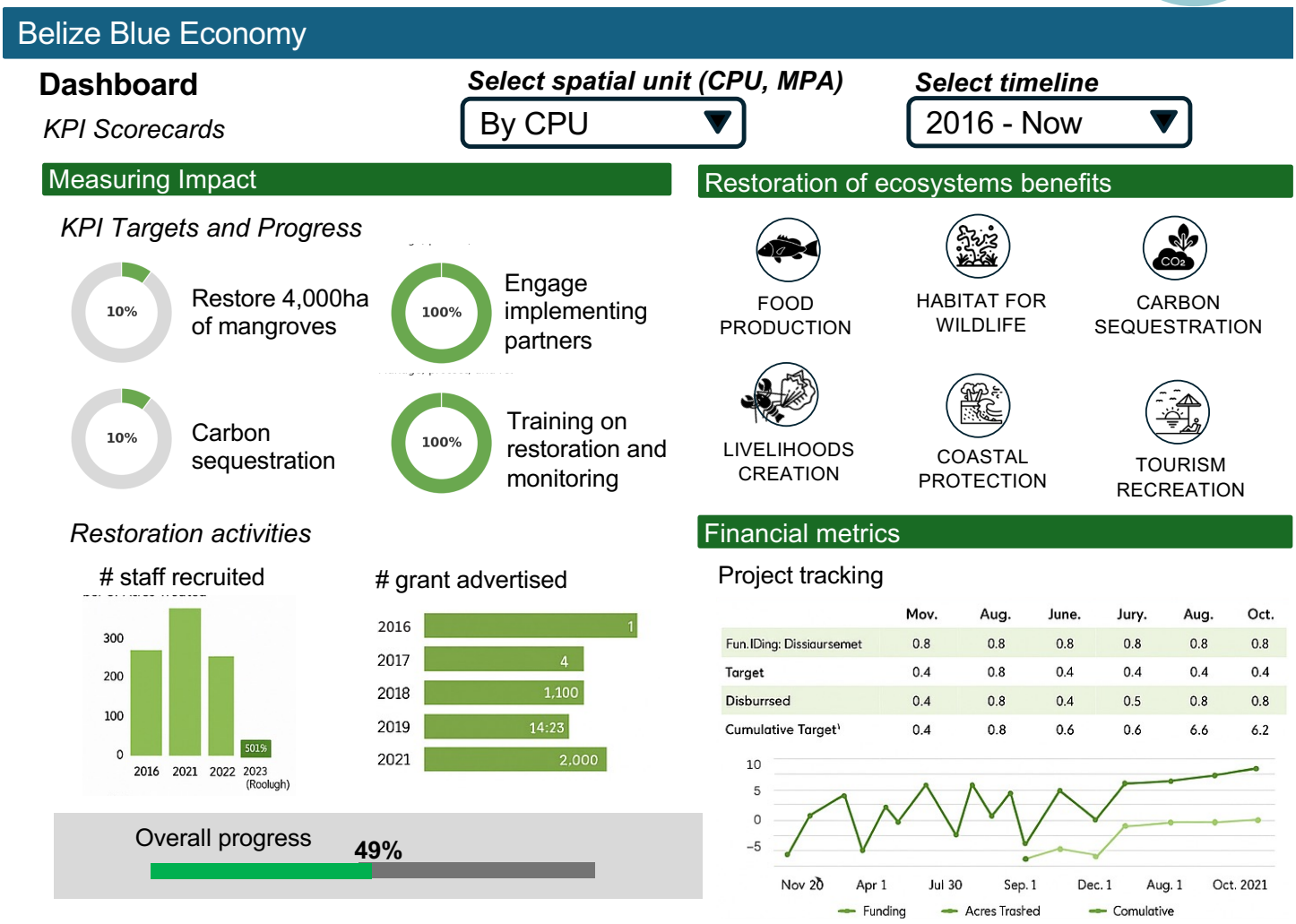

Figure 5: Example of score cards tracking ecosystem restoration KPIs performance

The dashboard will offer a streamlined interface for summarizing KPIs at multiple spatial scales – including MPAs, planning units, districts, and national levels –to inform multiple policy decisions and investment strategies. KPIs tracked by the Blue Economy Jobs monitoring tool will be summarized and integrated into the dashboard, enabling visualization of changes in livelihoods dependent on blue natural capital.

5. Capacity Development

Capacity development during this pilot was achieved through three main pathways.

(i) Participation in the integrated pilot team, whereby government, MDB, local NGO, and NatCap experts learned together how to scope and carry out a shared vision and technical work with specific pathways to policy and finance impact.

(ii) An in-person workshop in Belize

Held in Belize City in January 2024, this workshop brought together 33 participants from the pilot team, other government agencies, NGOs, and universities. The goal was to solidify a shared vision, define specific outcomes, and establish a timeline for the pilot's implementation.

Participants worked in breakout groups to complete four tasks:

1. Identify existing or future policy and finance mechanisms that require an MRV system, in Belize
2. Identify government agencies responsible for reporting
3. Define important KPIs
4. Identify barriers and challenges related to establishing an MRV system

Insights from this workshop directly informed the development of some of the KPIs described in Appendix 1, as well as the Blue Economy Jobs Monitoring Tool, and the centralized dashboard.

(iii) International knowledge exchange: two global forums at Stanford University in April 2023 and June 2024 brought together pilot teams from over 16 countries and three MDBs to share innovations, challenges, and solutions, fostering cross-country learning and collaboration.

In addition, to formally conclude this pilot project, the team shared findings and lessons learned at the Belize Blue Forum: Knowledge, Innovation and Action for Belize's Ocean and Thriving Blue Economy, hosted by the Government of Belize and IDB, in April 2025. This national forum provided a platform to disseminate results to diverse stakeholders and explore collaborative pathways for advancing Belize's MRV system for its blue economy.

Jade Delevaux at a workshop in Belize in January 2024. | Credit: Impact Media Lab.

6. Outcomes

Policy and Finance Implications and Pathways for Mainstreaming Natural Capital Approaches

6.1 Pilot Key Achievements and Outcomes

Guided by national priorities, the pilot designed three tools to support the advancement of policy and results-based finance for Belize's blue economy:

1. A KPI framework to track nature- and people-positive outcomes aligned with results-based finance instruments, including specifically the country's Blue Bonds and PFP.

2. A monitoring tool, a science-based survey tool to track Blue Economy Jobs KPIs under the RBB PFP, that supports community engagement, awareness, and capacity development.

3. A centralized dashboard to visualize, track, and share KPIs across agencies, improving transparency, data integration, and accountability for sustainable blue economy management.

The KPI framework developed through this pilot is designed to be embedded into Belize's Integrated Coastal Zone Management Plan and Belize Sustainable Ocean Plan, fulfilling key commitments under the Blue Bonds. By integrating targets for social, economic, environmental, climate, and governance KPIs into those plans, the Belizean government ensures that investments through the RBB PFP align with national development priorities and progress towards global targets such as the SDGs, the Kunming-Montreal Global Biodiversity Framework, and the Paris Agreement.

Building on this pilot, Belize plans to implement the dashboard in in the coming year, expanding its application beyond the Blue Bonds and Resilient Bold Belize PFP to broader blue economy initiatives. The pilot also fostered strategic partnerships, including collaboration with the Global Ocean Accounts Partnership,[44] which is advancing ocean and social accounting methods[45] and piloting them in Belize. All these efforts promote continuity, knowledge sharing, science-policy integration, and mainstreaming natural capital approaches by linking ecosystem assessments to formal accounting for the blue economy.

Beyond immediate reporting needs for results-based finance, the pilot built institutional capacity across involved stakeholders. Over 100 participants were trained on the implementation of natural capital approaches and adaptive management tools, specifically through the need for KPIs and MRV to finance the country's blue economy strategy.

6.2 Advancing Innovative Finance

Building on the cross-ministerial and institutional relationships developed in this pilot, Belize is advancing efforts to holistically integrate social, climate, and environmental KPIs into policy and finance mechanisms.

On the finance front, IDB is spearheading the design of an Outcome-Based Financing (OBF) Framework for Blue Biodiversity, similar to the results-based finance approach discussed in this report, focusing on the Mesoamerican Reef and Belize's marine ecosystems. Building on its successful experience with the Jaguar Impact Initiative, which demonstrated the viability of outcome-based financing for terrestrial ecosystem service stewardship and regeneration, IDB aims to adapt and implement this innovative financial approach for marine and coastal management.

44 The Global Ocean Accounts Partnership
45 Shellock and James, 2024

The goal is to establish a platform that connects an updated MRV System with public and private outcome payers, impact investors, and local solution providers. This platform will focus on building capacity for OBF mechanisms, including Social Impact Bonds (SIBs), Development Impact Bonds (DIBs), Social Impact Incentives (SIINCs), and Conservation Development Bonds (CBDs), specifically targeting a regenerative blue taxonomy. **The KPIs developed in this pilot will form the foundation for tracking outcomes of these investments and will be the cornerstone for a Blue Outcomes Fund for the Wider Caribbean Region.**

Additionally, the RBB PFP initiative should attract long-term funding directed at managing ecosystems and supporting resilient livelihoods. **The KPIs and MRV process developed in this pilot will provide evidence of the nature-economy linkages the RBB PFP-related investments aim to support.**

7. Implementation Strategy

In the implementation phase to follow, the team will deploy the work plans designed as part of this pilot (in the form of terms of reference). Specific next steps include:

1

Mainstream the KPI Framework. Collaborate with the government of Belize, NGOs, and other groups to validate and mainstream the framework of KPIs into their monitoring and learning programs (in particular, CZMAI, which is leading the development of the revised Integrated Coastal Zone Management Plan plan and the Belize Sustainable Ocean Plan under the Blue Bonds).

2

Deploy the Blue Economy Jobs Monitoring Tool. Collaborate with IDB, WWF-Belize, local communities, and the local government. The terms of references[46] to administer the survey outline three objectives: (1) enhance the partnership with WWF Belize and build local capacity, at the community level, for data collection, (with a focus on women surveyors), (2) administer a pilot survey to refine the tool based on field feedback, and (3) roll-out a full survey across all sites (Figure 6).

3

Implement the dashboard prototype. The implementation phase will be led by the Blue Bond Finance Permanence Unit. Key departments (such as the Coastal Zone Management Authority Institute, the Department of Forestry, the Belize Tourism Board, and the Department of Fisheries), already collecting environmental and social KPIs will help design mechanisms to integrate their data into BluePulse.[47]

4

Strengthen local capacity of key actors to harmonize monitoring efforts and track cross-sectoral KPIs. Training will focus on how to submit data to BluePulse, interpret the information, and use the insights to inform actions to secure blue natural and benefits to people.

46 ToR Blue Economy Jobs monitoring deployment

47 ToR Developing Dashboard Prototype

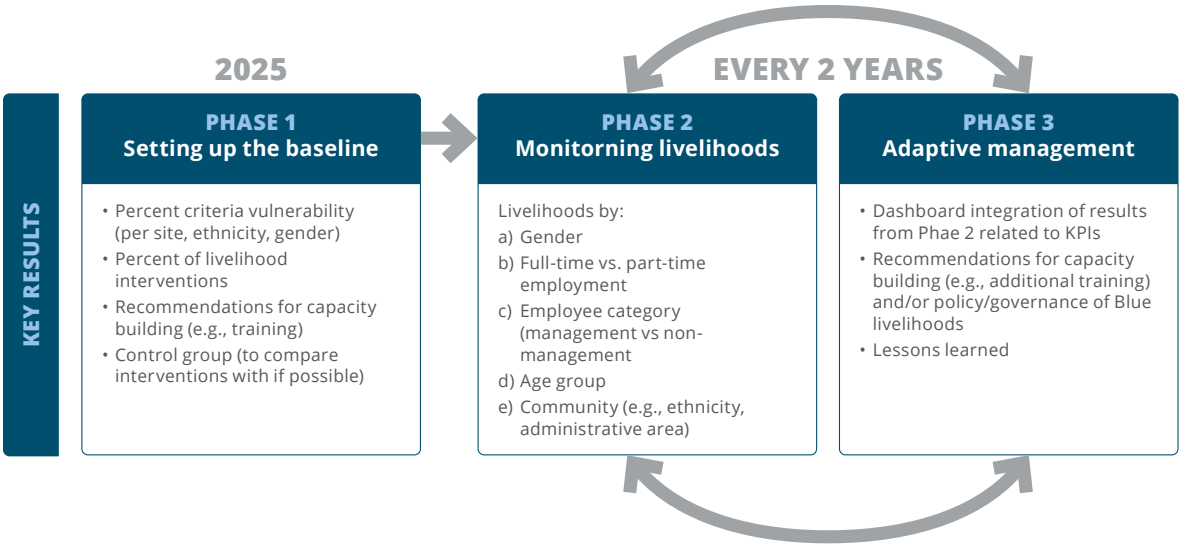

Figure 6: Framework for Blue Economy Jobs Monitoring. Survey results from Phase 1 establish the baseline indicators. The survey will be re-deployed every two years to track changes across demographic groups. The third phase focuses on presenting and synthesizing results – collected over time – to inform adaptive management.

8. Lessons Learned

The Belize pilot provided valuable insights into the importance of working with an integrated team of local leaders, scaling partners (e.g. MDBs), and scientists to co-develop a KPI framework and outline a dashboard to inform an MRV system aligned with national priorities. A key success factor was the role of dedicated local partners who facilitated connections with agencies, leaders, and networks. Their contributions, gathered through workshops and virtual calls, enriched the project with their knowledge. Additionally, longstanding relationships had previously been built by the NatCap team, which has worked in Belize for over 15 years conducting natural capital assessments with Belizean actors and strengthening capacity to embed those approaches in decision-making.[48] This existing trust enabled rapid integration into local networks, ensuring deeper collaboration and co-design of the KPI framework, the Blue Economy Jobs monitoring tool, and the dashboard.

The pilot also illuminated challenges such as uneven levels of engagement and capacity among partners. While some agencies fully embraced the process, others were hesitant due to concerns about data use and application of project outputs. These gaps highlight the need for targeted engagement and peer-learning opportunities in the implementation phase. However, the Forestry Department and Belize Tourism Board emerged as local champions for the establishment of an MRV system.

This pilot offers a replicable model for other countries pursuing results-based finance as a means to fund their blue economy strategies in ways that incorporate socio-economic and environmental protection goals

Read more on the pilot project page: https://bit.ly/3PsBelize.

DOI: 10.18235/0013713

48 Arkema, K., et al. 2023. **Evidence-Based Target Setting Forms Blue Carbon Strategies for Nationally Determined Contributions**. Nature Ecology and Evolution.

Delevaux, J., et al. 2024. Social-Ecological Benefits of Land-Sea Planning at Multiple Scales in Mesoamerica, Nature Sustainability

Appendix 1

KPI Framework

Table: Social (orange ●), economic (blue ●), and environmental (green ●) KPIs to choose from that are relevant to the Belize Blue Bonds and RBB PFP. KPI relevant to the RBB PFP and trackable by the Blue Livelihood monitoring tool described in Section 4.3 are marked by an *

Unit	Key Performance Indicators	Fisheries	Tourism	Climate	Conservation	Governance
Area (ha)	Corals, mangroves, seagrass health and extent	●	●	●	●	●
	Ecosystems restored or protected	●	●	●	●	
	Enhanced habitat connectivity	●		●	●	
	Development area complying with environmental codes	●	●	●	●	●
Volume (tons)	Fisheries yield	●				
	Change in targeted species biomass (fish, lobsters, conch)	●		●	●	
%	Bycatch reduction in commercial fisheries	●				
	No-take MPAs	●			●	
	Water quality levels change relative to baseline	●	●	●	●	
	Fisheries contribution to local food security	●				
	Compliance rate with existing regulations	●	●	●	●	●
	Gender equity in decision-making and businesses*	●	●	●	●	●
	Contribution of blue economy sectors to GDP	●	●		●	
	Sustainable seafood exported	●				
Index	Increased biodiversity relative to within and outside MPAs	●	●	●	●	
km	Coastline protected by natural infrastructure			●	●	

Unit	Key Performance Indicators	Fisheries	Tourism	Climate	Conservation	Governance
tons of CO_2	Carbon sequestered or emissions avoided annually			●	●	
Number	Increased of GHG mitigation related projects			●		
	Blue economy jobs created and supported (by gender)*	●	●	●	●	●
	Certified eco-businesses operating*	●	●			
	Visitors by MPA / Communities / Districts		●		●	
	Business plans creating sustainable livelihoods created and supported (by gender)*	●	●	●	●	●
	Trainers & trainees with nature-positive projects skills*	●	●	●	●	●
	Business plans to secure MPA operational budgets				●	●
	New policies supporting sustainability	●	●	●	●	●
	Local community participation and socio-demographic*	●	●	●	●	●
	People protected from coastal hazards			●		
$	Cost per unit area protected or restored				●	●
	Blue carbon credit sales total revenue			●		
	Fisheries and tourism businesses total revenue	●	●	●	●	
	Investments shared with local communities	●	●	●	●	●
	Reduction in coastal flood economic damages			●		
	Investments in resilience, capacity, equity, infrastructure*	●	●	●	●	●
	Fisheries market value in income	●				
	Change in income from blue economy sectors	●		●	●	
Other	ICZMP, BSOP, MPA management effectiveness using existing tools (e.g., National Protected Areas System Management Effective Assessment Tool1)	●	●	●	●	●

Appendix 2

Blue Economy Jobs Survey and Corresponding KPIs

Original Survey Question	KPI Category	KPI	Potential Outputs
Data Identification Number			
Monitoring Year			
1.1 Partner Organization Name			
1.2 Identify Community			Livelihood type by community
1.3 Is this Baseline or Endline Survey?			
1.4 What type of livelihood programs is this beneficiary planned to benefit from? (Baseline) • Fisheries • Seaweed cultivation • Tourism • Trade (e.g., boat and engine repair; electric and air conditioning repair) • Small business enterprise (e.g., lionfish and conch jewelry, others) • Environmental monitoring (e.g., coral reef and mangrove health) Each livelihood has its own section of questions 1.5 What type of livelihood programs has this beneficiary participated in? (Endline) • Fisheries • Seaweed cultivation • Tourism • Trade (e.g., boat and engine repair; electric and air conditioning repair) • Small business enterprise (e.g., lionfish and conch jewelry, others) • Environmental monitoring (e.g., coral reef and mangrove health)	Social, economic, and cultural impact	Local Job/ Business Creation	a) Employment (number of jobs created) b) Economic opportunities (Number of local people in a coastal area (within 50km of the coast) with increased economic opportunities (either through new jobs or increased incomes) c) Local job creation (Number of jobs created through PFP, blue carbon initiatives, especially in ecosystem restoration, conservation, and monitoring)
Section 2: General Information on Beneficiary			
2.1 What is your age? 2.2 What ethnic group do you identify with? 2.3 What is your gender? 2.4 What is the highest level of formal education you have attended? 2.4 What is your current marital status? 2.5 How many people are in your household? 2.6 Do you rent or own your home? 2.7 What is your current job?	Governance Social, economic, and cultural impact	Gender equity Stakeholder engagement Capacity development	a) Share of employees that are women b) Share of employees in management positions that are women. c) Number of people completing education/ training programs. d) Workforce Diversity (percentage of employees or leadership positions held by underrepresented groups (e.g., women, indigenous communities) e) Equitable Pay (Ratio of average wages for underrepresented groups compared to the organizational average)

Section 3: Output 1 – Fisheries			
3.1.0 What type of fishing activities are you involved in? • Lobster only • Conch only • Lobster and Conch only • Finfish only • Lobster, Conch, and Finfish • Other 3.1.1 What fishing gear do you use? • Hook stick • Free diving • Lobster Shades/Traps • Fish Traps • Handline • Spear Fishing • Cast Net • Fishing Pole (non-electrical) • Fishing Pole (electrical) • Other	Social, economic, and cultural impact	Gender equity Stakeholder engagement Capacity development	a) Share of employees that are women b) Share of employees in management positions that are women. People completing education/training programs. c) Workforce Diversity (percentage of employees or leadership positions held by underrepresented groups (e.g., women, indigenous communities) d) Local job creation (Number of jobs created through PFP, blue carbon initiatives, especially in ecosystem restoration, conservation, and monitoring)
3.1.2 Did you receive any additional training by <partner organization> for these activities? If yes, which activities did you participate in for training? 3.1.3 At present, what kind of employment are you engaged in? / What kind of employment generates the majority (more than 50%) of your income? 3.1.4 Do you work on a permanent basis, monthly or seasonal, or daily/weekly? 3.1.5 Are you in a management or non-management role? 3.1.6 What is your role? • Captain • Crew • Cook 3.1.7 Are you a member of a cooperative, association or social group/network?	Social, economic, and cultural impact	Gender equity Stakeholder engagement Capacity development	a) Share of employees that are women b) Share of employees in management positions that are women. People completing education/training programs. c) Workforce Diversity (percentage of employees or leadership positions held by underrepresented groups (e.g., women, indigenous communities) d) Local job creation (Number of jobs created through PFP, blue carbon initiatives, especially in ecosystem restoration, conservation, and monitoring)
3.1.8 Do you have more than one source of income?	Social, economic, and cultural impact	Local Job/ Business Creation	a) Diversity of Blue Economy Jobs (Assess the variety of income-generating activities that depend on mangroves, as this indicates the extent and resilience of dependence) b) Local job creation (Number of jobs created through PFP, blue carbon initiatives, especially in ecosystem restoration, conservation, and monitoring)

If yes, what are your sources?			
3.1.9 What is your monthly income? 3.1.10 How are you paid- cash only, both cash and in kind, and in-kind only? 3.1.11 When you compare now and a year ago, has your income increased, decreased or remained the same? 3.1.12 When you compare now and a year ago, have your savings - either in purchase of assets or through savings, increased, decreased or remained the same? 3.1.13 Are you interested in other types of skills training?	Social, economic, and cultural impact	Local Job/ Business Creation Income Growth	a) Income growth (Increase in income levels for (marginalized) communities benefiting from the project) b) Ratios of average entry-level wage compared to local minimum wage at significant locations of operation. c) Economic opportunities (Number of local people in a coastal area (within 50km of the coast) with increased economic opportunities (either through new jobs or increased incomes)
SECTION 3: OUTPUT 2 - SEAWEED CULTIVATION			
3.2.1 What type of seaweed cultivation activities are you involved in? • Harvesting • Processing • Marketing • Other 3.2.2 Did you receive any additional training by <partner organization> for these activities? If yes, which activities did you participate in for training? • Harvesting • Processing • Marketing • Other 3.2.3 At present, what kind of employment are you engaged in? / What kind of employment generates the majority (more than 50%) of your income? 3.2.4 Do you work on a permanent basis, monthly or seasonal, or daily/weekly? 3.2.5 Are you in a management or non-management role? 3.2.6 What is your role? 3.2.7 Are you a member of a cooperative, association or social group/network?	Governance Social, economic, and cultural impact	Gender equity Stakeholder engagement Capacity development	a) Share of employees that are women b) Share of employees in management positions that are women. People completing education/training programs. c) Workforce Diversity (percentage of employees or leadership positions held by underrepresented groups (e.g., women, indigenous communities) d) Local job creation (Number of jobs created through PFP, blue carbon initiatives, especially in ecosystem restoration, conservation, and monitoring)
3.2.8 Do you have more than one source of income?	Social, economic, and cultural impact	Local Job/ Business Creation	a) Diversity of Blue Economy Jobs (Assess the variety of income-generating activities that depend on mangroves, as this indicates the extent and resilience of dependence) b) Local job creation (Number of jobs created through PFP, blue carbon initiatives, especially in ecosystem restoration, conservation, and monitoring)

If yes, what are your sources?			
3.2.9 What is your monthly income? 3.2.10 How are you paid- cash only, both cash and in kind, and in-kind only? 3.2.11 When you compare now and a year ago, has your income increased, decreased or remained the same? 3.2.12 When you compare now and a year ago, have your savings - either in purchase of assets or through savings, increased, decreased or remained the same? 3.2.13 Are you interested in other types of skills training?	Social, economic, and cultural impact	Local Job/ Business Creation Income Growth	a) Income growth (Increase in income levels for (marginalized) communities benefiting from the project.) b) Ratios of average entry-level wage compared to local minimum wage at significant locations of operation. c) Economic opportunities (Number of local people in a coastal area (within 50km of the coast) with increased economic opportunities (either through new jobs or increased incomes)
Section 3: Output 3 – Tourism			
3.3.1 What type of tourism activities are you involved in? • Wildlife watching • Daytours (diving and snorkeling) • Fly Fishing • Boat captain licencing • Dive certification • Hospitality (e.g., hotel jobs as bartender, waitress, chef, hotel manager) 3.3.2 Did you receive any additional training by <partner organization> for these activities? If yes, which activities did you participate in for training? • Wildlife watching • Daytours (diving and snorkeling) • Fly Fishing • Boat captain licencing • Dive certification • Hospitality (e.g., hotel jobs as bartender, waitress, chef, hotel manager) 3.3.3 At present, what kind of employment are you engaged in? / What kind of employment generates the majority (more than 50%) of your income? 3.3.4 Do you work on a permanent basis, monthly or seasonal, or daily/weekly? 3.3.5 Are you in a management or non-management role? 3.3.6 What is your role? 3.3.7 Are you a member of a cooperative, association or social group/network?	Governance Social, economic, and cultural impact	Gender equity Stakeholder engagement Capacity development	a) Share of employees that are women b) Share of employees in management positions that are women. People completing education/training programs. c) Workforce Diversity (percentage of employees or leadership positions held by underrepresented groups (e.g., women, indigenous communities) d) Local job creation (Number of jobs created through PFP, blue carbon initiatives, especially in ecosystem restoration, conservation, and monitoring)
3.3.8 Do you have more than one source of income?	Social, economic, and cultural impact	Local Job/ Business Creation	a) Diversity of Blue Economy Jobs (Assess the variety of income-generating activities that depend on mangroves, as this indicates the extent and resilience of dependence) b) Local job creation (Number of jobs created through PFP, blue carbon initiatives, especially in ecosystem restoration, conservation, and monitoring)

If yes, what are your sources?			
3.3.9 What is your monthly income? 3.3.10 How are you paid- cash only, both cash and in kind, and in-kind only? 3.3.11 When you compare now and a year ago, has your income increased, decreased or remained the same? 3.3.12 When you compare now and a year ago, have your savings - either in purchase of assets or through savings, increased, decreased or remained the same? 3.1.13 Are you interested in other types of skills training?	Social, economic, and cultural impact	Local Job/ Business Creation Income Growth	a) Income growth (Increase in income levels for (marginalized) communities benefiting from the project.) b) Ratios of average entry-level wage compared to local minimum wage at significant locations of operation. c) Economic opportunities (Number of local people in a coastal area (within 50km of the coast) with increased economic opportunities (either through new jobs or increased incomes)
Section 3: Output 4 – Trade			
3.4.1 What type of trade activities are you involved in? • Construction • Electric and air conditioning repair • Boat repair • Boat captain licensing 3.4.2 Did you receive any additional training by <partner organization> for these activities? If yes, which activities did you participate in for training? • Construction • Electric and air conditioning repair • Boat repair • Boat captain licensing 3.4.3 At present, what kind of employment are you engaged in? / What kind of employment generates the majority (more than 50%) of your income? 3.4.4 Do you work on a permanent basis, monthly or seasonal, or daily/weekly? 3.4.5 Are you in a management or non-management role? 3.4.6 What is your role? 3.4.7 Are you a member of a cooperative, association or social group/network?	Governance Social, economic, and cultural impact	Gender equity Stakeholder engagement Capacity development	a) Share of employees that are women b) Share of employees in management positions that are women. People completing education/training programs. c) Workforce Diversity (percentage of employees or leadership positions held by underrepresented groups (e.g., women, indigenous communities) d) Local job creation (Number of jobs created through PFP, blue carbon initiatives, especially in ecosystem restoration, conservation, and monitoring)
3.4.8 Do you have more than one source of income?	Social, economic, and cultural impact	Local Job/ Business Creation	a) Diversity of Blue Economy Jobs (Assess the variety of income-generating activities that depend on mangroves, as this indicates the extent and resilience of dependence) b) Local job creation (Number of jobs created through PFP, blue carbon initiatives, especially in ecosystem restoration, conservation, and monitoring)

If yes, what are your other jobs?			
3.4.9 What is your monthly income? 3.4.10 How are you paid- cash only, both cash and in kind, and in-kind only? 3.4.11 When you compare now and a year ago, has your income increased, decreased or remained the same? 3.4.12 When you compare now and a year ago, have your savings - either in purchase of assets or through savings, increased, decreased or remained the same? 3.4.13 Are you interested in other types of skills training?	Social, economic, and cultural impact	Local Job/ Business Creation Income Growth	a) Income growth (Increase in income levels for (marginalized) communities benefiting from the project.) b) Ratios of average entry-level wage compared to local minimum wage at significant locations of operation. c) Economic opportunities (Number of local people in a coastal area (within 50km of the coast) with increased economic opportunities (either through new jobs or increased incomes)
Section 3: Output 5 - Small Business Enterprise			
3.5.1 Are you currently running your own business or have you run your own business at some point in the last year? 3.5.2 What is your role? 3.5.3 Has your business been registered by the local or national government? 3.5.4 When did you start your business? 3.5.5 How many months did you run your own business? 3.5.6 Do you work on a permanent basis, monthly or seasonal, or daily/weekly?	Governance Social, economic, and cultural impact	Gender equity Stakeholder engagement Capacity development	a) Share of existing supported or new supported business out of existing businesses b) Workforce Diversity (percentage of employees or leadership positions held by underrepresented groups (e.g., women, indigenous communities) c) Local job creation (Number of jobs created through PFP, blue carbon initiatives, especially in ecosystem restoration, conservation, and monitoring)
3.5.7 Do you have more than one source of income?	Social, economic, and cultural impact	Local Job/ Business Creation	a) Diversity of Blue Economy Jobs (Assess the variety of income-generating activities that depend on mangroves, as this indicates the extent and resilience of dependence) b) Local job creation (Number of jobs created through PFP, blue carbon initiatives, especially in ecosystem restoration, conservation, and monitoring)
If yes, what are your other jobs?			

3.5.8 What is your monthly income? 3.5.9 How are you paid- cash only, both cash and in kind, and in-kind only? 3.5.10 When you compare now and a year ago, has your income increased, decreased or remained the same? 3.5.11 When you compare now and a year ago, have your savings - either in purchase of assets or through savings, increased, decreased or remained the same? 3.5.12 What is your monthly income? 3.5.13 How are you paid- cash only, both cash and in kind, and in-kind only? 3.5.14 When you compare now and a year ago, has your income increased, decreased or remained the same? 3.4.15 Are you interested in other types of skills training?	Social, economic, and cultural impact	Local Job/ Business Creation Income Growth	a) Income growth (Increase in income levels for (marginalized) communities benefiting from the project.) b) Ratios of average entry-level wage compared to local minimum wage at significant locations of operation. c) Economic opportunities (Number of local people in a coastal area (within 50km of the coast) with increased economic opportunities (either through new jobs or increased incomes)
Section 3: Output 6 - Environmental Monitoring			
3.6.1 What type of environmental monitoring activities are you involved in? • Mangrove Restoration • Coral Restoration • Ranger c) Workforce Diversity (percentage of employees or leadership positions held by underrepresented groups (e.g., women, indigenous communities) d) Local job creation (Number of jobs created through PFP, blue carbon initiatives, especially in ecosystem restoration, conservation, and monitoring) 3.6.2 Did you receive any additional training by <partner organization> for these activities? If yes, which activities did you participate in for training? • Mangrove Restoration • Coral Restoration • Ranger 3.6.3 At present, what kind of employment are you engaged in? / What kind of employment generates the majority (more than 50%) of your income? 3.6.4 Do you work on a permanent basis, monthly or seasonal, or daily/weekly? 3.6.5 Are you in a management or non-management role? 3.6.6 What is your role? 3.6.7 Are you a member of a cooperative, association or social group/network?	Governance Social, economic, and cultural impact	Gender equity Stakeholder engagement Capacity development	a) Share of employees that are women b) Share of employees in management positions that are women. People completing education/training programs.

3.6.8 Do you have more than one source of income?	Social, economic, and cultural impact	Local Job/ Business Creation	a) Diversity of Blue Economy Jobs (Assess the variety of income-generating activities that depend on mangroves, as this indicates the extent and resilience of dependence) b) Local job creation (Number of jobs created through PFP, blue carbon initiatives, especially in ecosystem restoration, conservation, and monitoring)
If yes, what are your sources?			
3.6.9 What is your monthly income? 3.6.10 How are you paid- cash only, both cash and in kind, and in-kind only? 3.6.11 When you compare now and a year ago, has your income increased, decreased or remained the same? 3.6.12 When you compare now and a year ago, have your savings - either in purchase of assets or through savings, increased, decreased or remained the same? 3.6.13 Are you interested in other types of skills training?	Social, economic, and cultural impact	Local Job/ Business Creation Income Growth	a) Income growth (Increase in income levels for (marginalized) communities benefiting from the project.) b) Ratios of average entry-level wage compared to local minimum wage at significant locations of operation. c) Economic opportunities (Number of local people in a coastal area (within 50km of the coast) with increased economic opportunities (either through new jobs or increased incomes)
Section 4: Household Income Detail			
4.1 Who else in your house contributes to household income? Check all answers that apply.			
4.2 What is the main income source for the other income earners? Check all answers that apply.			
Completion Date/Time			

Appendix 3

Deploying Blue Economy Jobs monitoring ToR

Blue Livelihood monitoring tool sampling strategy

1. Implement the piloting of the surveys
    - Complete 60 surveys (50% men and 50% women, 20 in northern Belize, 20 Central Belize and 20 Southern Belize sampling rural to more urban communities (e.g., Punta Negra, Caye Caulker, Belize City)
    - Provide further suggestions and input to improve the survey.
    - Check survey entries to smart phones and validation of survey data transmittal to Seascape Solutions and the Natural Capital Project study teams.
2. Full survey roll-out and implementation
    - Complete 640 surveys according to a sampling strategy co-designed by WWF Belize, Seascape Solutions and The Natural Capital Project (Table 1)
    - Ensure survey entries to smart phones are transmitted to Seascape Solutions and The Natural Capital Project.
    - Each surveyor needs to complete the following free training to comply with Stanford IRB requirements https://ccts.uic.edu/resources/cirtification/

Table 1: Sampling location and number of surveys to complete

City, Town or Village	Sampling
Belize City	80
Caye Caulker	40
San Pedro	80
Independence-Mango Creek	80
Chunox	40
Copper Bank	20
Sarteneja	40
Gales Point	20
Hopkins	40
Riversdale	20
Seine Bight	20
Monkey River	16
Punta Negra	16
Punta Gorda	16
Barranco	16
Dangriga	40
Maya Beach	16
Placencia	40


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