TURNING POLICY INTO POSSIBILITY

How Belize brought institutions, producers and communities together to chart a pathway for sustainable mariculture

BE-CLME+

CRFM / BE-CLME+ Project

CASE STUDY



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CAF DEVELOPMENT BANK OF LATIN AMERICA
Food and Agriculture Organization of the United Nations
CRFM Caribbean Regional Fisheries Mechanism
gef global environment facility INVESTING IN OUR PLANET
Department of Sustainable Fisheries For Our Future
BELIZE COASTAL ZONE MANAGEMENT AUTHORITY & INSTITUTE
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Belize has no shortage of ambition for its marine economy.

Its extensive coastline, rich marine ecosystems, long fishing tradition and experience with shrimp aquaculture provide a strong foundation for developing mariculture as part of a sustainable blue economy. Seaweed cultivation, in particular, has emerged as one of the country's most active forms of mariculture, with women-led producer groups playing an important role in its development.

In 2021, Belize took an important step by adopting its National Mariculture Policy, setting out a vision for a sustainable, responsible and economically viable sector.

But having a policy and making it happen are two very different things.

By 2026, the central question was no longer simply what does Belize want its mariculture sector to become? It was much more practical:



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What needs to happen first?

Who needs to do it?

What will it cost?

What needs to change for producers, investors and government institutions to be able to act?

Under the BE-CLME+ Project[1], the Caribbean Regional Fisheries Mechanism (CRFM) commissioned ITACA Solutions to work with the Government of Belize and stakeholders across the country to answer those questions and translate the National Mariculture Policy into a practical National Mariculture Policy Implementation Plan (NMPIP).

The result was a sequenced Implementation Plan covering 20 activities across the Policy's 5 (five) Priority Areas.

But perhaps the more important story is how that pathway was built: by starting with the experiences of the people and institutions expected to make it work.

A plan built on the experiences of people and institutions.



Women farming seewed - Belize women's seawed farmers association (BWSFA)

1. The BE-CLME+ Project is a regional initiative designed to promote sustainable blue growth across the Caribbean, executed by the Caribbean Regional Fisheries Mechanism (CRFM) Secretariat, with CAF and FAO as co-implementing partners. BE-CLME+ supports participating Caribbean countries to advance Blue Economy priorities through MSP, MPAs, the Ecosystem Approach to Fisheries (EAF), climate-smart sustainable fisheries value chains and knowledge management.

From South to North

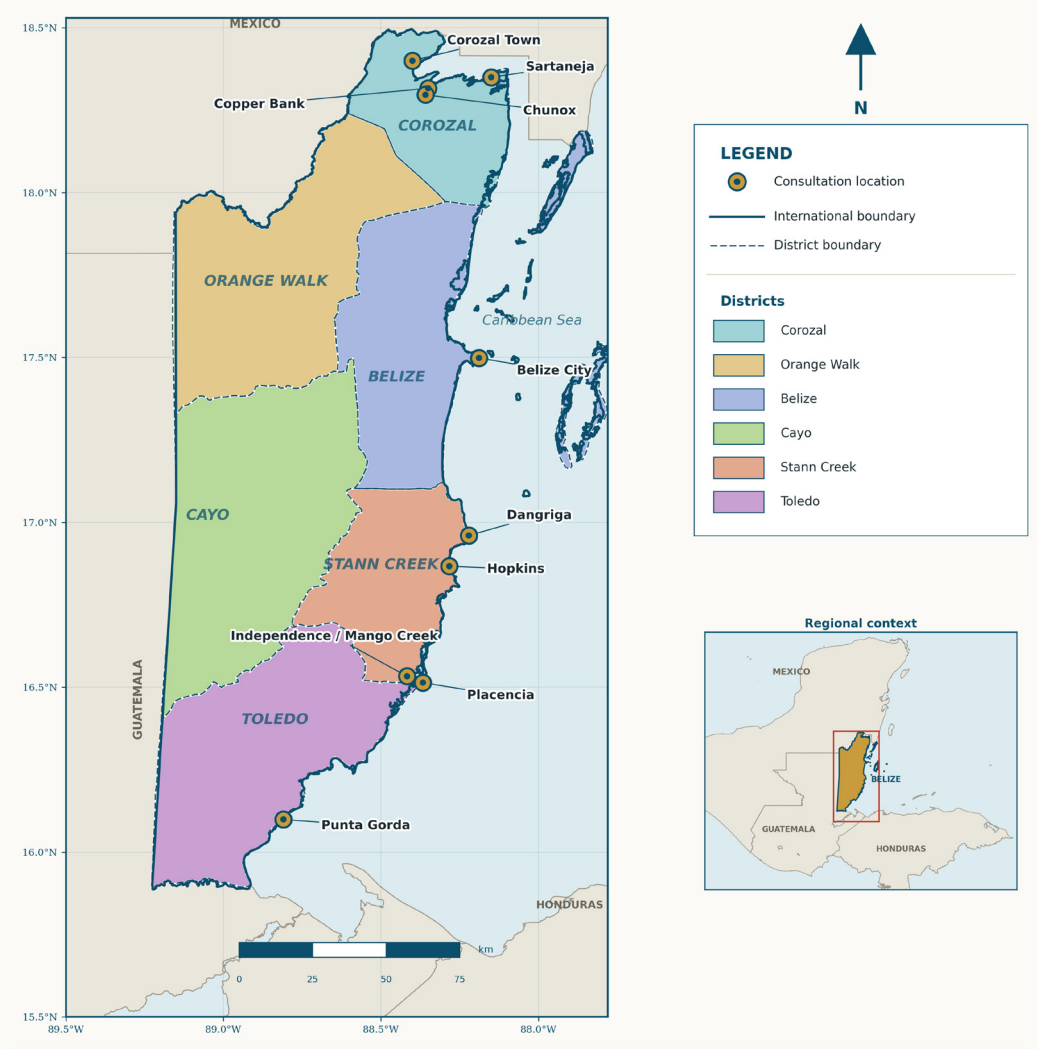


Figure 1 Map of locations where consultations were held

Rather than beginning around a table in Belize City, the consultation process was deliberately designed to start closer to where mariculture happens. Between March and April 2026, the team moved from Punta Gorda in southern Belize to the northern district of Corozal, passing through Placencia, Mango Creek, Independence, Hopkins, Dangriga, Belize City, Sartaneja, Chunox, and Copper , and engaging seaweed producers, fishing associations and conservation organisations, financial institutions, researchers, businesses and community representatives (see a map of communities visited in Figure 1 above)



Many community consultations were deliberately held before the higher-level institutional discussions took place in Belize City. The idea was simple: the realities encountered by people trying to participate in the sector should inform the conversations about how the sector is governed - not the other way around.



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The process also sought to reach stakeholders who can easily be missed by national centralized consultation processes. Meetings were organised around geographic distance and livelihood commitments; consultations were conducted in Spanish where needed; and specific attention was given to women-led seaweed enterprises.

By the end of the process, 44 structured consultations involving 92 participants had been conducted across Belize's coastal districts.

And as those conversations accumulated, a picture began to emerge.

44 consultations

92 participants

The problem was not simply how to produce more

Belize had already experimented with different forms of mariculture. Its history included a pilot cultivating sea cucumbers (Holothuria mexicana, Holothuria floridana and Isostichopus badiontus) in former shrimp ponds, as well as trials with cobia (Rachycentron canadum) and queen conch (Aliger gigas) and the more recent expansion of seaweed cultivation. Some initiatives had succeeded; others had disappeared without reaching scale.

That history mattered.

The consultations suggested that developing the sector could not simply mean training more people, introducing another species or financing another pilot.



Again and again, stakeholders pointed towards the need to strengthen the enabling environment. Their concerns/ questions pointed towards;

- **Who has authority to lease the seabed?**
- **How does an entrepreneur navigate several government agencies to obtain approval?**
- **What licence allows a successful pilot to become a commercial operation?**
- **Where are the markets?**
- **What standards and certification will buyers require?**
- **How can producers obtain finance when the regulatory pathway itself remains uncertain?**



The baseline assessment identified institutional fragmentation and unclear licensing responsibilities as a major structural risk. The absence of a clear and affordable seabed tenure pathway emerged as another fundamental bottleneck, alongside weak market intelligence and certification systems and discontinuities between training, finance and market access.

These findings shaped the logic of the Implementation Plan.

Instead of asking "How can Belize produce more mariculture products?", the process increasingly asked:



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"What conditions need to exist before sustainable production can grow?"

That distinction became fundamental.

The emerging sequencing placed regulatory and institutional foundations first; standards, extension services and pilots next; and larger-scale growth only once those foundations were in place.

In other words, the process began to shift the emphasis from projects to systems.

Making sure consultation actually shaped the plan

Listening to 92 people creates another challenge: how do you ensure their contributions survive the journey from consultation notes into a national policy document?

Consultation processes can generate enormous amounts of information. Once findings are synthesised, however, it can become difficult to see where a recommendation came from - or whether it reflects stakeholder evidence at all.

For the NMPIP, the team therefore built traceability into the process from the beginning.

Each consultation was captured in a coded Stakeholder Consultation Record. Recommendations and evidence were then organised through an evidence register and linked through a Policy Traceability Matrix to the relevant statements and outcomes of the National Mariculture Policy.

This created a chain (see Figure 2 below):



Figure 2 Embedding traceability and accountability in Belize' National Mariculture Implementation Plan

The resulting Implementation Plan therefore allows activities to be traced back to the consultations that informed them whilst following a results-based management approach.

This was not simply a documentation exercise. It helped protect something more important: the integrity of the consultation process, ensuring recommendations were not only heard but actioned upon.

A concern raised by a producer in a coastal community did not have to disappear into a generic statement that "stakeholders identified challenges". It could remain connected to the evidence that eventually justified an activity in the national plan.



Using technology without replacing judgement

Managing that volume of information required new ways of working. AI-assisted tools were thus used to help structure consultation records, identify recurring themes across the evidence base, cross-check references and maintain consistency as different versions of the Implementation Plan evolved.

But there was an important boundary: AI did not determine which stakeholder views to embrace, nor decided between competing policy options, and it did not make recommendations on behalf of the technical team. Those decisions remained with the specialists working with CRFM, government counterparts and stakeholders.



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Instead, the technology helped the team manage complexity without losing the evidence underneath it - making it easier for human judgement to be applied consistently across a large body of consultation material. For CRFM, this offers a potentially useful lesson beyond mariculture: digital tools can strengthen participatory policy processes when they are used to preserve and interrogate evidence rather than substitute for expertise and dialogue.

Bringing the plan back

By July 2026, months of consultation and analysis had become a draft Implementation Plan. But one important test remained.

On 14 July 2026, CRFM, the Belize Fisheries Department and the Coastal Zone Management Authority and Institute convened a national Stakeholder Validation Workshop. The principle behind the workshop was important: the plan needed to go back to the people and institutions whose knowledge had helped create it.

Thirty-six people participated in person and another five remotely, bringing together government agencies, CRFM, financing partners, academia, conservation organisations, fishing organisations, seaweed producers and private-sector actors. Women represented a majority of both the in-person and online participants.

The purpose was not to start the diagnosis again. Participants were being asked something harder:



Kappaphycus alvarezii,
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Did the plan correctly translate what had been heard into actions that were realistic, properly sequenced, adequately financed and owned by the right institutions?

The afternoon moved from presentations into working sessions on technical and site-selection issues, licensing and institutional arrangements, and sustainable finance. And the plan changed.

From consultation to collective problem-solving

The validation workshop exposed the implementation choices that still needed to be resolved.

Participants scrutinised the proposed licensing pathway and developed the concept further towards a single-window system that could reduce the time, cost and uncertainty faced by applicants navigating multiple agencies. They also warned that digitising the process could itself exclude people with limited internet access or digital literacy - leading to recommendations for extension support alongside an online system.



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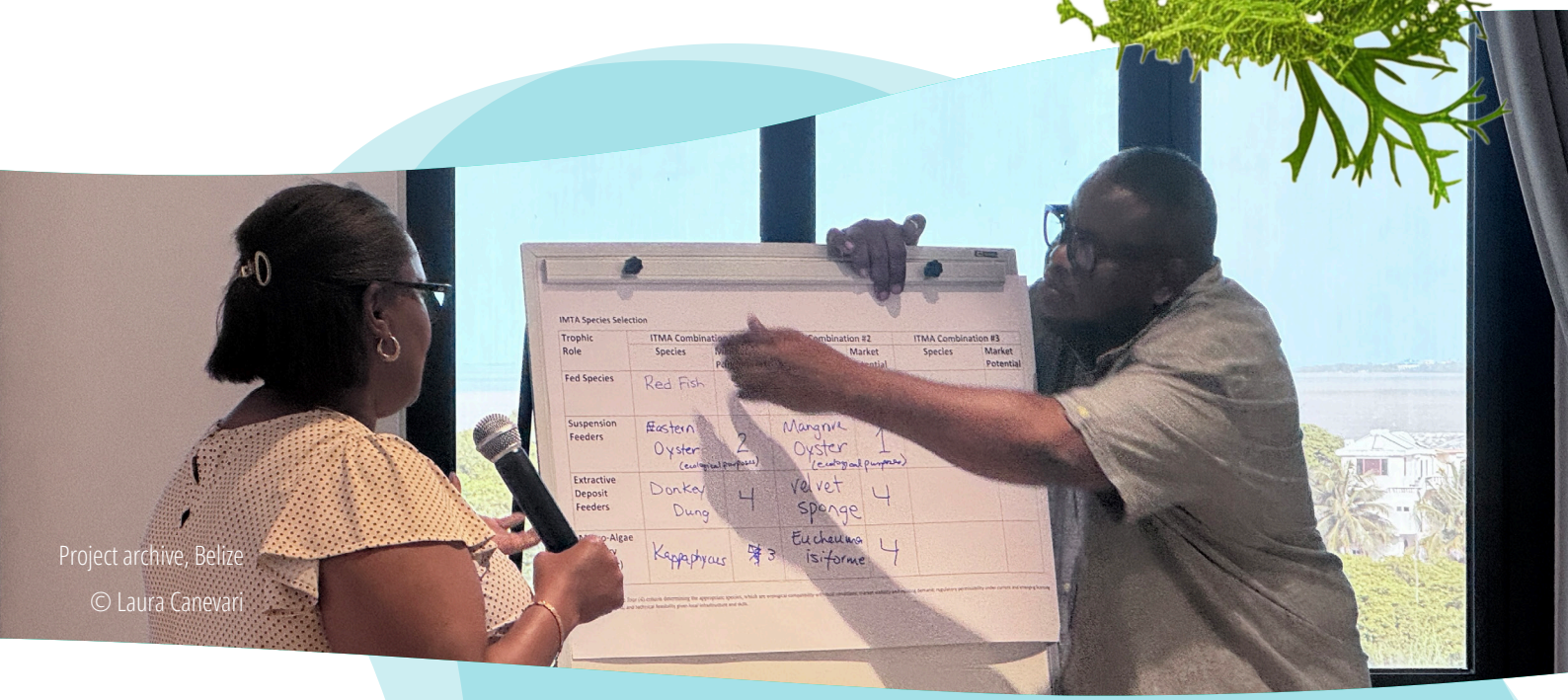
The sustainable-finance group challenged several initial cost assumptions and argued that implementation, public awareness and enforcement had been under-budgeted.



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And when participants were asked to identify the most important priorities for the coming 6–12 months, a clear set of enabling actions emerged:

- Define the single-window mechanism
- Resolve seabed leasing and create a viable commercial licensing pathway
- Identify institutional champions capable of driving implementation
- Treat gender and social inclusion as a principle running through the entire plan rather than as an isolated activity.



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This was precisely what validation was meant to do.

Consultation had informed the draft. The draft was returned to stakeholders. Stakeholders challenged it. And their input changed the plan.



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A plan people can see themselves in

The final value of the process is therefore not only the Implementation Plan itself. It is also the shared evidence base behind it.

For government institutions, that provides a clearer basis for understanding why particular reforms have been prioritised and which institutions need to act. For CRFM, it creates a documented pathway connecting national policy ambitions with the realities identified by producers, regulators, financiers and other stakeholders. And for the people who participated, it creates a stronger possibility that consultation becomes more than an invitation to speak - because their input can be followed through into the actions being proposed.

The validation results provide an encouraging indication of this ownership. Among the participants who completed the workshop evaluation, none rated their opportunity to influence the process below "moderately extensive"; most also considered their contributions very or extremely important to facilitators and peers; and all rated their learning about the Implementation Plan as extensive or very extensive.

Yet the evaluation also captured an important note of caution. Respondents considered implementation likely or very likely, while a small number remained neutral or doubtful. The workshop report links this hesitation to a recurring concern raised during the process: Belize has developed strong policies before, but implementation and enforcement have not always followed.

That tension may be one of the most important lessons of the entire exercise.

The real work begins now

An implementation plan cannot guarantee implementation. It can clarify responsibilities. It can establish priorities. It can estimate resources. It can identify financing opportunities and create mechanisms for accountability.

But ultimately, a plan becomes real only when institutions and people act on it.

Belize's NMPIP therefore represents both an achievement and a starting point. The process transformed ten policy statements and five Policy Priority Areas into a sequenced programme of action. It identified immediate institutional and regulatory reforms, pathways for building markets and standards, approaches for strengthening capacity and extension services, and options for financing the transition towards a sustainable and climate-resilient mariculture sector.



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But the broader lesson reaches beyond mariculture and beyond Belize. Turning policy into practice is not primarily an exercise in writing a better plan. It requires listening before designing. It requires understanding why previous initiatives struggled. It requires bringing communities, producers, regulators, researchers, financiers and government institutions into the same problem-solving process. It requires preserving the evidence behind difficult decisions. And it requires returning a proposed solution to the people expected to implement it and giving them a genuine opportunity to change it.

For CRFM and its Member States, the Belize experience offers a replicable approach, illustrated in Figure 3 below

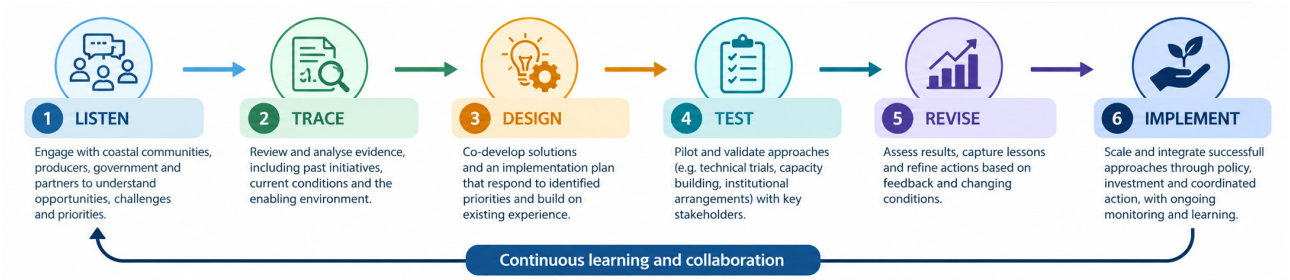


Figure 3 a replicable approach for mariculture development in Belize and the Caribbean

Because the strongest implementation plan is not simply one that is technically sound.

It is one in which the people and institutions responsible for making change happen can recognise both the problem they described and the pathway they helped to build.



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