

How-To Guide for Mangrove-Positive Lending

Actionable Roadmap for Microfinance Institutions

Prepared for:



By:



EXECUTIVE SUMMARY

Purpose of The Roadmap

This roadmap provides microfinance institutions (MFIs) with an actionable pathway to develop and implement mangrove-positive lending approaches. The document addresses the critical need to mobilize financial resources for mangrove conservation, restoration, and sustainable use at the household and microenterprise level as part of a broader effort to mobilize finance for mangroves.

Mangrove ecosystems face alarming deforestation rates, with an estimated 20-35% of global mangrove extent lost between 1960 and 2010.¹ The International Union for Conservation of Nature found that more than half of the world's mangrove ecosystems are at risk of collapse. The Mangrove Breakthrough initiative estimates that addressing this challenge will require mobilizing approximately \$4 billion by 2030 to protect and restore 15 million hectares of mangroves.²



Why This Matters Now

Impact Potential: Mangroves support millions of people in coastal communities through fisheries, aquaculture, and ecotourism while providing critical ecosystem services like coastal protection and water filtration.

Physical Risk Reduction: Healthy mangroves reduce property damage by over \$82 billion annually and protect 18+ million people from storms.³ Borrowers in areas with intact mangroves face lower climate-related risks, reducing non-repayment risk.

Regulatory Compliance: Merging regulations across major consumer markets are increasingly tightening requirements on deforestation-free supply chains. These frameworks extend to mangrove forests, creating immediate and anticipated compliance obligations for financial institutions lending to exporters of commodities like palm oil, beef, timber, cocoa, coffee, rubber, and soy (e.g., under the EU Deforestation Regulation). Non-compliance could restrict borrowers' market access, in turn, posing material credit and repayment risks for lenders.

Access to International Capital: International financial institutions are earmarking more funds for environmental criteria, with ocean finance as a rapidly expanding segment where mangrove conservation is prioritized.

Revenue Generation: Lending to mangrove-positive businesses and projects represent market opportunities through specialized environmental finance products.

Reputational Value: Proactive environmental lending differentiates MFIs as leaders while avoiding headline risks from financing harmful projects.

Roadmap Summary



STEP 1. BUILD AWARENESS

Identify institutional incentives

Identify impact potential, risk reduction, regulatory compliance, revenue generation, international capital access, or reputational value

Assess barriers to mangrove-positive lending

Address common obstacles including due diligence and risk assessment limitations, subjectivity in mangrove-positive business classifications, etc.

Size the market opportunity

Estimate the size of the potential loan portfolio of mangrove-positive businesses, and use publicly available geospatial maps to evaluate the number of clients dependent on mangroves for climate and environmental risk reduction

Present the case internally

Present mangrove-positive lending as a risk mitigation and portfolio growth opportunity rather than an additional environmental initiative

1.1

1.2

1.3

1.4

STEP 2. PILOTING MANGROVE-POSITIVE LENDING

Set clear success metrics and objectives

Establish measurable financial performance, environmental impact, and institutional learning objectives before launch

Screen & select pilot businesses and activities

Screen existing pipeline for "do-no-harm" approaches by excluding loans that degrade mangrove areas, screen for positive attributes, and select mangrove-positive businesses that best meet success criteria

Implement and document the process

Design and implement the pilot, designing loan products, creating detailed records, and tracking stakeholder engagements and operational processes

Analyze pilot outcomes

Analyze outcomes of the pilot to inform scaling

2.1

2.2

2.3

2.4

STEP 3. EVALUATION AND SCALING

Evaluate pilot and ensure institutional learning

Implement comprehensive staff training, adopt standardized assessment tools, and build internal expertise networks

Access international capital and global partnerships

Partner with development finance institutions, climate funds, and specialized credit facilities that offer concessional capital for environmental investments

Establish monitoring, reporting and continuous improvement

Create comprehensive tracking for both financial performance and environmental outcomes with third-party verification capabilities

Regulatory alignment and policy advocacy

Stay current with developing environmental regulations, international standards, and disclosure requirements that may impact mangrove-positive lending; contribute to the development of industry standards and best practices

3.1

3.2

3.3

3.4

INDICATIVE OUTCOMES AND TIMELINE

Immediate (0-6 months)

Internal opportunity scoping, awareness raising, adoption of tools

Short-term (6-18 months)

Pilot execution, process refinement, and initial partnership development

Medium-term (18-36 months)

Loan repayment and capital recycling, portfolio expansion, international capital access, and specialized product development

Long-term (3+ years)

Market leadership in environmental finance, diversified revenue streams, and measurable portfolio risk reduction



About the Mangrove Breakthrough

The Mangrove Breakthrough, co-designed with the Global Mangrove Alliance, is a global movement and guiding force for systemic change — redefining how mangroves are valued, financed, and embedded into climate and economic agendas. It brings together governments, investors, civil society, and local communities with the mission of mobilizing \$4 billion to secure the future of over 15 million hectares of mangroves by 2030. The Breakthrough was launched at COP27 and advances sector-specific goals:

1. **Halt loss:** reduce net human-driven mangrove loss to zero
2. **Double protection:** ensure long term protection for 80% of remaining mangroves
3. **Restore half:** restore mangroves to cover at least half of all recent loss
4. **Drive sustainable finance** to existing mangrove extent

About This Report

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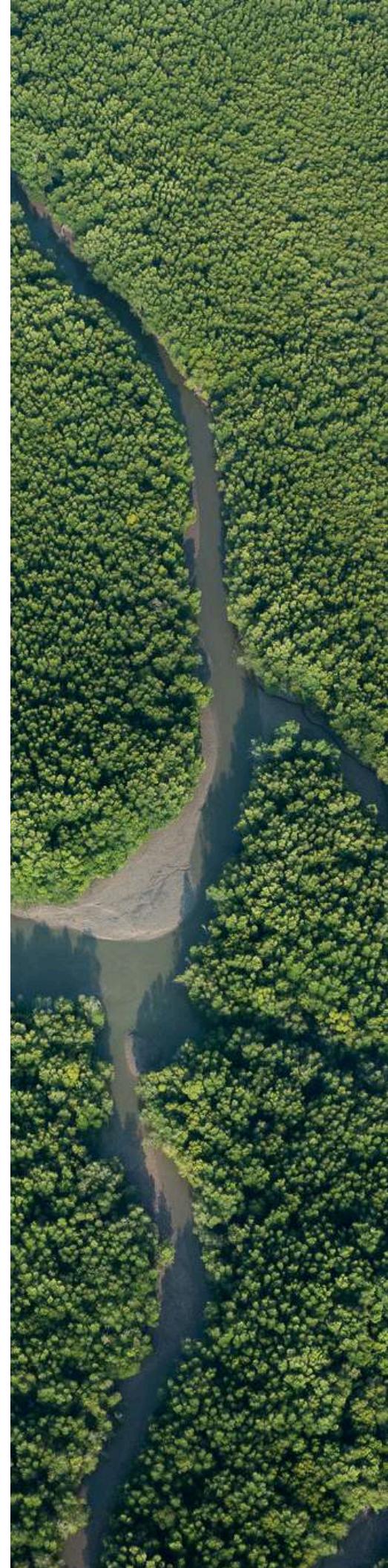
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DEFINITION OF A MANGROVE-POSITIVE BUSINESS

What are Mangrove-Adjacent Businesses and Mangrove-Positive Business Models?

What is mangrove-positive? Mangrove-positive is a global goal to halt and reverse mangrove loss, measured from a baseline in 2020, by increasing mangrove protection, restoration, sustainable management, and transforming systems to address the underlying drivers of mangrove loss. By 2030, mangrove forests should be visibly and measurably on the path to recovery. By 2050, mangrove ecosystems must be fully restored, delivering meaningful benefits to nature, people, and the economy.

What is a mangrove-positive business contributor?

is one that sustainably derives value from, depends on, and/or benefits from mangrove ecosystems, and that channels finance and/or business practices toward their conservation, restoration, and/or address underlying threats to the ecosystem. These businesses include, but are not limited to, those in coastal agriculture and aquaculture, sustainable resource use, blue carbon projects, infrastructure, hospitality and tourism, as well as other downstream corporate actors.

Consequently, for this purpose, we will define mangrove-adjacent businesses as those that may not operate directly within mangrove landscapes, but whose activities influence, depend on, or benefit from mangrove ecosystems.

These Mangrove-Positive Business models can be viewed along a spectrum, best illustrated in the Mangrove Transition Curve⁴ (Figure 1) on the page below:

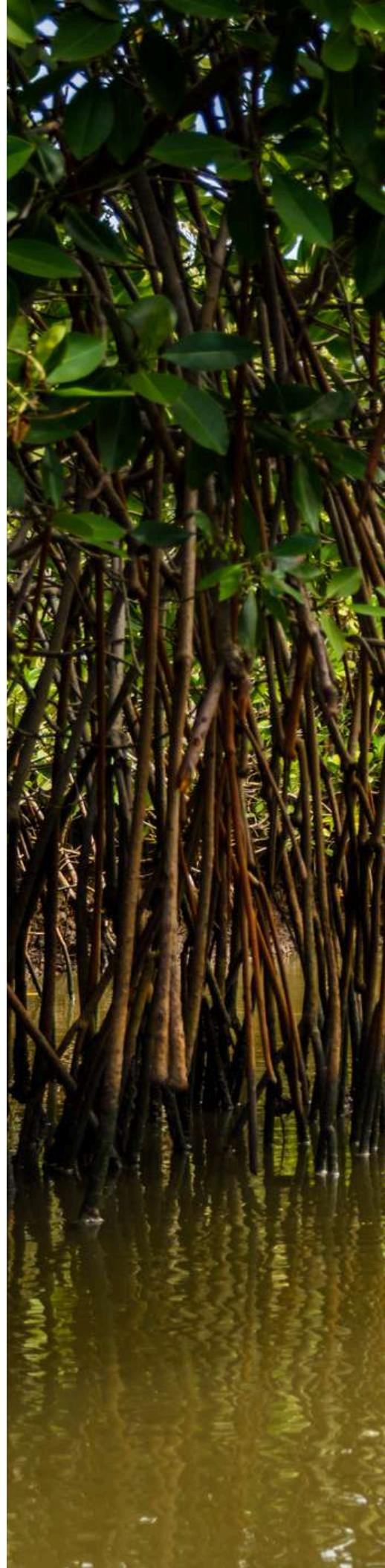
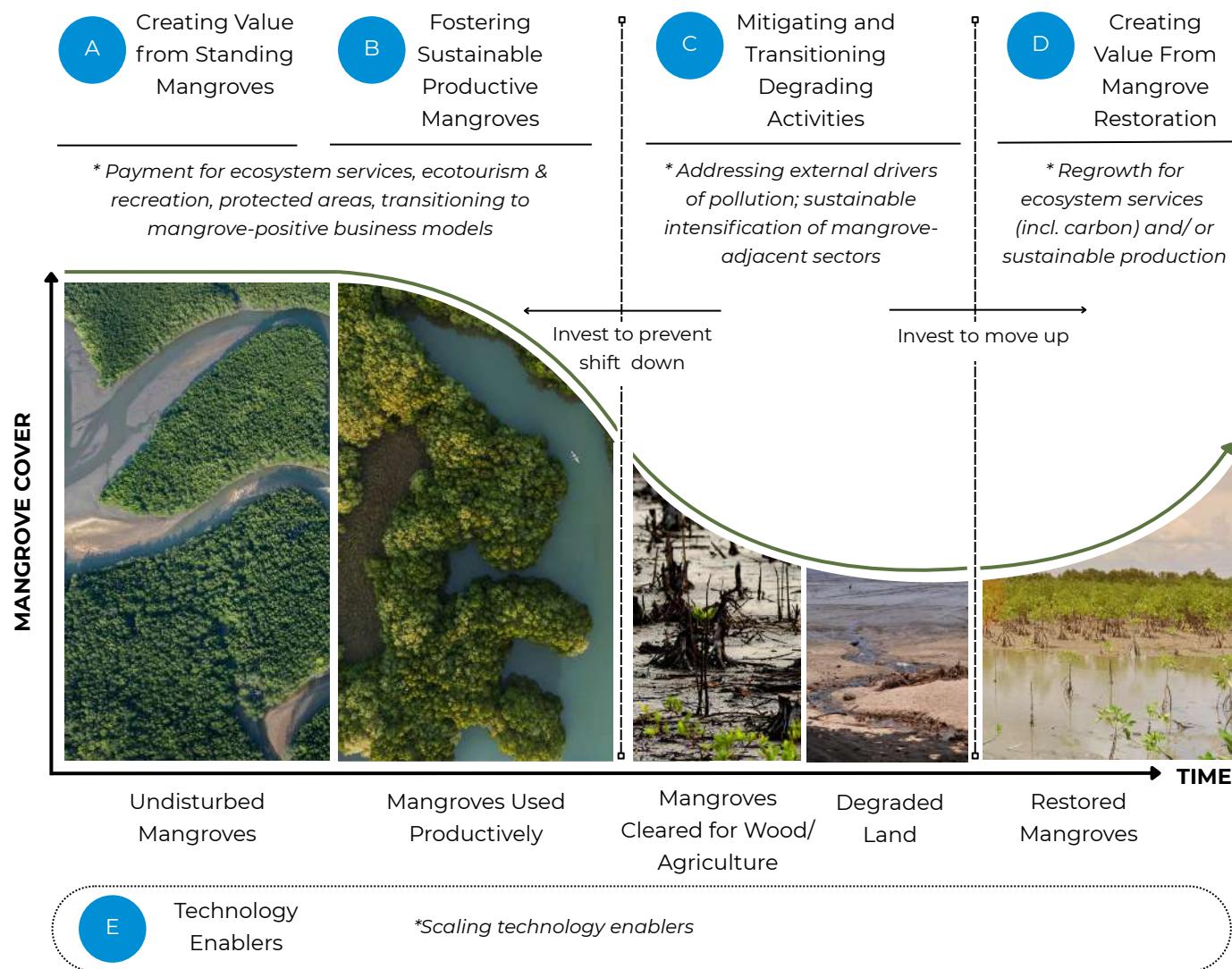


Figure 1: The Mangrove Transition Curve



Note: Mangrove Transition Curve. Adapted from "The Mangrove Breakthrough Financial Roadmap", by Jennifer Ring et. al, page 30. Copyright 2003, by Systemiq and the Mangrove Breakthrough. Adapted with permission

Illustrative Mangrove-Positive Businesses and Priority Sectors

Economically, mangroves provide a wide range of livelihood opportunities for coastal communities.⁵ Small and microenterprises across a number of different sectors hold the potential to be considered mangrove-positive. Inclusion in the table below does not in itself confirm eligibility; rather MFIs should still assess these small businesses and community-led enterprises using the steps outlined in the subsequent sections. The examples below are intended to be illustrative rather than exhaustive.

Figure 2: illustrative mangrove-positive business sectors

Sector	Illustrative Businesses	Description	Mangrove Impact Transition Curve
 Sustainable Tourism & Hospitality	Mangrove canoe tour business	Low-cost ecotourism ventures that generate income while incentivizing mangrove protection	Creates value from standing mangroves A
 Non-Timber Forest Products (NTFP)	Mangrove honey social enterprise	Women owned businesses sell honey from beekeeping that uses mangrove blossoms, incentivizing mangrove protection	Creates value from standing mangroves A
 Non-Timber Forest Products (NTFP)	Mangrove based crafts cooperative	Local women's cooperatives sell woven baskets, dyes, soaps, or paper made from mangrove bark/leaves sustainably harvested	Fosters sustainable products B
 Coastal Fisheries & Aquaculture	Oyster farming cooperative	Women owned businesses sustainably harvest oysters from mangrove ecosystem	Fosters sustainable products B
 Waste Management & Recycling	Youth-run enterprise collecting coastal plastics	Small scale recycling operations reduce marine pollution that harms mangroves	Mitigates degrading activities C
 Renewable Energy & Energy Efficiency	Household loans for clean cookstoves	Household loans for clean cookstoves reduce dependence on mangroves, while also delivering health and time-saving benefits for families	Mitigates degrading activities C
 Near Coastal Agriculture & Agri-Processing	Smallholder rice farm	Smallholder farmer plants "mangrove buffers" to protect against saltwater intrusion and reinforce estuary banks	Creates value from restoring mangroves D
 Ecosystem Services (provisioning, regulating, cultural & supporting services)	Payment for Ecosystem Services (PES) scheme	Households or cooperatives plant and protect mangroves in exchange for small payments from municipal or local government	Creates value from restoring mangroves D
 Services Sector	Tech enabled community monitoring	Youth and community members are hired to monitor mangrove health and prevent illegal logging using GPS, smartphones, and mobile apps	Technology enabler E

Types of Microfinance Providers and Illustrative Mangrove-Positive Models

Microfinance is provided by a diverse range of institutions, including rural banks, non-governmental organizations (NGOs), non-bank financial institutions (NBFIs) such as Savings and Credit Cooperative Organizations (SACCOs), and the more informal community-based savings and lending models often referred to as Village Savings and Loan Associations (VSLAs). While their core mission is similar, to expand financial services within underserved communities to achieve socio-economic and other impacts, these institutions differ in structure, scale, regulatory oversight, and delivery models. They range from informal, member-managed savings groups like VSLAs to more formal, regulated entities with sizable balance sheets and nationwide or even global lending operations.^{6, 7}



Figure 3: Characteristics of Microfinance Provider Continued

Provider Type	Structure	Operational Scale	Delivery Model	Illustrative Mangrove Borrowers
Rural and Microfinance Banks	Licensed financial institutions, often privately owned but locally focused	Medium to Large: often regional to national presence and large client base	Typically branch-based; formal loan and savings products	Women owned businesses sustainably harvest oysters from mangrove ecosystem
Non-Governmental Organizations (NGOs)	Not-for-profit, often international	Small to Large: often not exclusively focused on microfinance, operate through pilots	Flexible models; technical assistance heavy, may include a range of products and services	Household loans for clean cookstoves reduce dependence on mangroves, while also delivering health and time-saving benefits for families
Non-Bank Financial Institutions (NBFI)	Private institutions offering financial services without a banking license	Small to Medium: Can range up to regional, with moderate client base	Flexible models; often use mobile agents, fintech, or lending platforms	Small scale recycling operations reduce marine pollution that harms mangroves
Savings and Credit Cooperative Organizations (SACCOs)	Member-owned financial cooperatives	Small to Medium: operates in a few communities (maybe regional) with low loan volume	Membership based; savings-driven; democratic lending decisions	Increase community financial resilience to reduce pressure on mangrove damaging practices
Village Savings and Loan Associations (VSLAs)	Informal self-managed groups	Very small: often one village or community; very limited assets	Group managed; savings pooled and lent internally	Businesses that sell honey from beekeeping that uses mangrove blossoms, incentivizing mangrove protection
Impact Asset Managers and Microfinance Investment Vehicles	Private or publicly owned financial institutions with a mandate to invest and mobilize capital for social, environmental and economic outcomes	Large: Often international investors with significant assets under management (AUM)	Can invest in microfinance institutions (concessional loans, equity, guarantees) to provide capital to on-lend to local businesses	On-lend to mangrove-positive microfinance providers

ROADMAP FOR INVESTING IN MANGROVE POSITIVE MICROFINANCE

Step 1. Building Awareness of the Benefits of a Mangrove-Positive Approach: Understand Incentives, Barriers, and Strategies

1.1 IDENTIFY INCENTIVES RELEVANT TO THE INSTITUTION

Building a successful case for mangrove-positive lending within an MFI requires identifying the specific motivating factors that will resonate with leadership and aligning the business case with strategic priorities. Whether or not the MFI has previously considered mangroves in impact priority decisions, emerging regulations, market trends, and business opportunities are creating both risks and opportunities that make mangrove conservation, restoration, and sustainable use increasingly relevant. The following guidance will help identify which drivers are most relevant to the MFI, what types of barriers stand between these institutions and increasing financing for mangroves, and how to leverage the incentives identified to build internal consensus and momentum to develop mangrove-positive lending approaches. Different MFIs will be motivated by different drivers – some may be primarily concerned with regulatory compliance, others with accessing new capital sources, and still others with increased or diversified social and environmental impact potential.

The key to building internal support is demonstrating how mangrove-positive lending directly advances the institution's existing goals and helps address its specific challenges.



READER EXERCISE



Understand which incentives will be most motivating to your institution. Review the options below thinking about how they apply to your institution. Fill in the checklist below to begin cataloguing the leverage points that will help you build the case internally for developing mangrove-positive lending practices and products.

Checklist: Incentives for a mangrove-positive approach

Impact potential	
Physical risk reduction potential	
Regulatory compliance	
Revenue generation	
Opportunities to access earmarked capital	
Reputational Value and Brand Development	

ILLUSTRATIVE EXAMPLE



This requires a systematic assessment of the institution's regulatory operating environment, ESG commitments, and strategic priorities to identify the most compelling incentives.

Impact potential. Mangrove ecosystems are the base of critical livelihood systems for millions of people in coastal communities globally, supporting locally important wild-caught fisheries, aquaculture operations, and eco-tourism activities, while also providing ecosystem services including protecting against coastal erosion and filtering pollutants and excess nutrients from coastal waters.

Physical risk reduction. Mangroves enhance the resilience of coastal areas by providing natural protection against storm surge, soil erosion, and salinization. A recent study found that mangroves reduce property damage by more than \$82 billion USD annually, and protect more than 18 million people around the world from the worst effects of storms.⁸

Borrowers operating in mangrove-adjacent areas with healthy ecosystems demonstrate measurably lower exposure to climate and nature-related physical risks compared to areas denuded of mangroves, adding an additional impact outcome for MFI lending and reducing borrower repayment risk related to natural hazards.

Regulatory compliance. MFIs face mounting pressure from investors around environmental and social reporting due in part to emerging environmental regulations like the EU's new Sustainable Finance Disclosure Regulation (SFDR). The SFDR requires financial market participants to disclose how they integrate sustainability risks and adverse impacts into their investment processes and products. The SFDR directly impacts MFIs outside the EU only if they actively market products or services to EU clients; however, non-EU MFIs face significant indirect pressure to comply with SFDR-style sustainability disclosures because their EU investors need this information to meet their own regulatory obligations. The regulation is becoming a de facto global standard, with non-EU firms impacted indirectly due to EU subsidiaries, services offered in the EU, and market pressure.⁹ While receiving capital from an EU investor wouldn't legally

Ecotourism: A local hotel wants to establish kayaking tours as a service offering to attract more and higher-paying guests. The hotel requests a loan to conserve and restore mangroves adjacent to their beachfront. The loan finances mangrove clean-up, replanting, and a monitoring and reporting mechanism to ensure the mangrove is not disturbed. The borrower demonstrates that comparable hotels that are adjacent to healthy mangroves and offer kayak tours have higher revenue, effectively making the business case for this loan.



ILLUSTRATIVE EXAMPLE



mandate an MFI to comply with SFDR, it would likely carry contractual requirements to provide sustainability reporting to help the EU investor meet their disclosure obligations, creating practical compliance pressure even without direct legal requirement. The SFDR covers both biodiversity and greenhouse gas considerations, making it highly relevant to investments that impact mangroves.

Opportunities to access earmarked capital. International financial institutions (IFIs) are increasingly earmarking funds for specific ESG and climate criteria, creating significant opportunities for MFIs that can demonstrate environmental lending expertise. Within this broader trend, ocean finance represents a rapidly expanding segment where mangrove conservation and restoration are prioritized outcomes. Developing a robust mangrove-positive lending portfolio could be a strategy to attract international capital to expand lending capacity, as IFIs actively seek partners capable of originating and managing mangrove-positive lending portfolios. MFIs that establish this expertise can increase liquidity through multiple channels, including green or blue funding lines, and specialized credit facilities that prioritize environmental outcomes in their partner selection criteria.

Reputational value and brand development. Proactive mangrove-positive lending differentiates MFIs as environmental leaders, creating competitive advantages with investors, other capital providers, and international institutions prioritizing environmental criteria in partnerships. Conversely, financing that contributes to mangrove degradation exposes institutions to headline risk from increased environmental scrutiny and emerging litigation risk as communities pursue legal action against funders of harmful projects. These risks can be mitigated through proactive mangrove-positive approaches.

1.2 IDENTIFY BARRIERS TO MANGROVE-POSITIVE LENDING

Microfinance was first developed to address the barriers that prevent very low-income and marginalized people from accessing formal credit. The sector as a whole faces distinct

The #BackBlue Ocean Finance Commitment is a UN-backed initiative launched in 2021 that commits IFIs with \$3.45 trillion in assets under management to aligning their financial policies to accelerate the transition to a health ocean economy, aiming to drive at least \$500 million of investment into coastal and ocean regeneration and resilience by 2030. Members have committed to adopting net-zero plans, as well as Taskforce on Climate-related Financial Disclosure (TCFD) and Taskforce on Nature-related Financial Disclosures (TNFD) reporting, a significant catalyst for them to prioritize these matters in investment decision making.



challenges in addition to the specific barriers that stand between MFIs and mangrove-adjacent and mangrove-dependent communities and microenterprises, which are detailed below.

Due diligence and risk assessment limitations. Keeping interest rates as low as possible is key to microlending to make financing affordable, so cost-efficient due diligence is crucial. Microfinance providers often do high volumes of small loans, making due diligence and risk assessment of individual loans challenging from an institutional cost-benefit perspective. Mangroves are less studied in the context of microfinance, and providers lack specific assessment tools to facilitate due diligence.

Subjectivity in mangrove-positive business classification. Credit officers may struggle to assess microenterprises and whether specific business activities impact mangrove ecosystems positively, negatively, or not at all. This capacity issue also complicates loan categorization, impact measurement, and regulatory compliance across jurisdictions.¹⁰

Monetization uncertainty for mangrove-positive activities. MFIs lack expertise and guidance for evaluating microenterprises' revenue generating options from mangrove conservation, restoration, and sustainable use activities. This uncertainty complicates assessment of commercial viability. Lack of empirical ROI data for mangrove-positive activities limits scaling by more risk-adverse lenders but can be overcome through dedicated efforts to compile existing evidence and developing standardized taxonomic definitions of mangrove-positive business activities and tagging systems to track their financial and sustainability performance as an asset class.¹¹

Borrower capacity to implement best practices in mangrove conservation. While microenterprises and local communities may operate in close proximity to, or directly depend on, mangroves, the relationships between coastal communities and their environment are extremely complex.¹²

Checklist: Barriers to Mangrove-Positive Lending

Due diligence and risk assessment	
Subjectivity in mangrove positive business classification	
Limited pipeline & early stage ventures	
Monetization uncertainty for mangrove-positive activities	
Borrower capacity to implement best practices in mangrove conservation	
Regulatory, land tenure, and policy uncertainty in coastal areas	

USEFUL TOOLS



These reports discuss strategies for overcoming barriers to nature-based solutions investing:

- [Increasing Success and Effectiveness of Mangrove Conservation Investments: A Guide for Project Developers, Donors, and Investors](#)
- [Financing Nature-Based Solutions for Coastal Protection](#)

Without clear assurance that borrowers are following best practices, MFIs run the risk of unintentionally financing activities that degrade mangroves, or of being accused of greenwashing if loans marketed as “mangrove-positive” end up supporting harmful practices. This challenge underscores the importance of pairing credit with capacity-building support and monitoring systems, which can provide both the borrower and the lender with confidence that financed activities deliver genuine ecological and livelihood benefits.

Regulatory, land tenure, and policy uncertainty in coastal areas.

Coastal areas often face complex regulations from national and local governments, including additional zoning requirements, environmental regulations, and unclear or overlapping land tenure and customary use claims. The presence of mangroves in coastal areas can add a further layer of regulatory complexity, as many governments have established specific rules around mangrove access and conservation. Definitional ambiguity as to what is considered a mangrove can add additional complications, as mangroves occur across five continents in distinct forms and governments don't use a standard mangrove classification system. These barriers can be overcome on a case-by-case basis but cannot be ignored as a persistent barrier to scaling mangrove-positive financing of any kind, including microfinance.

The barriers to mangrove-positive lending are not insurmountable. Understanding and overcoming these barriers will position microfinance to play a crucial role in supporting mangrove-positive microenterprises and enabling the most successful models to thrive, attract commercial financing, and achieve greater scale of impact in mangrove conservation, restoration, and sustainable use. Misunderstanding can be addressed through targeted staff training and awareness raising; partnerships and/or blended finance structures can overcome technical gaps and liquidity issues; and complex land rights and regulatory challenges can be navigated with the support of legal experts, civil society partners, and standardized tools. The exact solutions will need to be tailored to each MFI's context,



but tools such as those in the box below, and similar resources, can help institutions think through practical approaches. Ultimately, what matters most is coming armed with an understanding of the main barriers and a few promising pathways to address them.

1.3 SIZE THE MARKET OPPORTUNITY

Understanding the size of the business opportunity for mangrove-positive lending is crucial for understanding both portfolio growth potential and the institution's exposure to losses if mangroves are not included in risk management screening. These are two critical drivers of building internal support. How many potential clients are mangrove-adjacent or mangrove-dependent? What is the potential for risk to borrowers in the institution's portfolio? Estimate these elements to justify the focus on mangroves.

Understand total addressable market. Begin by cross-referencing potential customer data with publicly available geospatial maps, such as those provided by [Global Mangrove Watch](#), which are open-source, regularly updated, and country-specific. Determine the customer base within five kilometers of a mangrove ecosystem. Mangrove-dependent microenterprises and activities can be approximated by applying the sectoral guidance above (page 3). Since mangrove dependencies vary greatly by sector and economic activity type, it may be helpful to choose a subset of potential recipients that is relevant to the institution's portfolio. For example, if the MFI has significant experience lending to small-scale aquaculture and fisheries, consider focusing the market sizing on these familiar recipients.

MFIs can identify mangrove-adjacent microenterprises and activities not only by their proximity to mangrove areas but also by assessing whether their economic activities rely on mangroves and/or products. To do so, use tools such as [ENCORE](#) (Exploring Natural Capital Opportunities, Risks, and Exposure) to systematically map sectoral dependencies on coastal ecosystems like mangroves. The Taskforce on Nature-related Financial Disclosures (TNFD) has curated a full list of nature-related tools [available here](#).



READER EXERCISE



How many businesses and projects does your institution currently support within 25 kilometers of a mangrove ecosystem? Use the Global Mangrove Watch tool to identify those investments.





Once recipients are identified, estimate their capital and technical support needs, their likelihood of repayment, and the possibility of establishing solidarity groups. Is microlending the appropriate mechanism for the target borrowers? What is the intended use of proceeds? What repayment timeline and structure best align with borrowers' income cycles and capacity? What kind of technical assistance do they require? Are social relationships and community structures conducive to solidarity group collateral approaches? To obtain this information, a combination of data analysis and customer outreach is likely the best approach. It is critical to understand if mangrove-adjacent and mangrove-dependent households and microenterprises want access to finance under the terms offered.

1.4 PRESENT THE CASE INTERNALLY

Equipped with the analysis conducted in Sections 1.1 to 1.3, present the case to management. This section provides guidance on how to communicate effectively with internal stakeholders to build support for the development and implementation of mangrove-positive lending approaches.

Identify key stakeholders. Map the internal approval chain for new lending initiatives, including credit committee members, risk management leadership, sustainability officers (if they exist), and business line heads. Understanding who influences lending and portfolio development decisions helps determine where to focus internal advocacy efforts.

Build a coalition of internal champions. Identify colleagues who may be interested in a mangrove-positive initiative, or who have expertise in related areas. In addition to the stakeholder groups above, this might include staff with ESG responsibilities, those with experience in agricultural lending, or relationship managers who work with coastal businesses. Having multiple advocates across different departments strengthens the internal case.

Completing the outreach and analysis will result in an estimate for the total number of businesses eligible, average size and tenor of potential loans, and the composition of the borrowers for a pilot project. With this information, perform the following calculations:

ELIGIBLE BUSINESSES
ESTIMATED AVERAGE
LOAN SIZE =
TARGET MARKET

BORROWERS IN PILOT
POOL
ESTIMATE AVERAGE
LOAN SIZE =
SIZE OF PILOT LOAN
PROGRAM





Find or develop local case studies. Research and document successful mangrove-positive businesses operating in the region, even if they are not current clients. Focus on companies that demonstrate clear revenue generation, job creation, and financial sustainability. Quantify their economic impact where possible, including revenue figures, employment numbers, and growth trajectories.

Demonstrate competitive necessity. Frame mangrove-positive lending not just as an opportunity but as a competitive necessity. Show how regulatory changes, client demands, or peer initiatives are creating market pressures that require a response. This urgency can help overcome institutional inertia.

Step 2. Piloting Mangrove-Positive Lending

After securing leadership-level endorsement for pursuing mangrove-positive lending, develop a pilot for the approach. A well-structured pilot program serves as the foundation for scaling mangrove-positive lending across the institution. Effective pilots require systematic planning, clear success metrics, and robust documentation to generate actionable insights for future expansion. The following sub-steps described in this section are important for selecting and implementing the right pilot project:

1. Set clear success metrics and objectives
2. Identify and select the pilot businesses or activities
3. Implement & document the process
4. Analyze the outcomes

2.1 SET CLEAR SUCCESS METRICS AND OBJECTIVES

Establishing clear success metrics is essential before launching the pilot program. The institution must define specific objectives upfront to determine whether the initiative succeeds or fails. These predetermined criteria serve dual purposes: they guide loan officers in identifying optimal opportunities and enable management to assess the approach's scalability and replication potential.

What metrics would be key for your institution to track in a pilot activity? Metrics should include both financial and environmental performance.



Define measurable outcomes before launching the pilot.

A successful mangrove-positive approach requires both financial performance and environmental impact metrics.

The institution should establish specific, measurable objectives that align with both financial goals and environmental outcomes in the following categories:

- Financial metrics, including traditional MFI indicators to measure loan performance, such as default rates, return on investment, and profitability.
- Mangrove-positive environmental outcomes: these indicators may vary by sector but might include hectares of mangrove habitat protected and/or restored and biodiversity conservation outcomes, at minimum. The [Global Oceans Accounts Partnership](#) also provides a full list of potential indicators of mangrove health.
- Institutional learning outcomes: measures should focus on building internal capacity and refining processes. These include staff competency in mangrove-positive activity identification, lessons learned from recipients for mangrove-positive activities, and evaluating the success and challenges encountered in any partnerships initiated.

Adopt mangrove impact measurement standards. Ensure that a specific outcome evaluation tool or framework is identified for any mangrove-specific indicators tracked against institutional sustainability commitments.

Establish realistic impact timeline expectations. It is crucial to understand the expected timelines for measurable impact from the specific mangrove-positive aspects of the chosen pilot. Risk reduction benefits from protecting standing mangroves are enjoyed immediately, while benefits from sustainable use and restoration activities will vary depending on the type of intervention.



Total loan portfolio and pipeline

Businesses that have anything at all to do with mangroves

Those that do no harm

Those with mangrove-positive attributes

Pilot loan portfolio

2.2 IDENTIFY AND SELECT PILOT ENTERPRISES AND ACTIVITIES

Identify mangrove-adjacent businesses in current pipeline and portfolio. Using the definition of mangrove-positive businesses, and the tools and methods described above in Step 1.3, begin by identifying mangrove-adjacent microenterprises and activities in the current pipeline of applicants and existing borrowers. These current applicants or existing borrowers are the most well situated to be pilot recipients depending on their existing proximity to, or dependencies on, mangroves.

Apply screening for a do-no-harm approach. At its most basic, a mangrove-positive approach must ensure that the institution does not lend to microenterprises or activities that harm mangrove ecosystems. Using an Environmental and Social Risk Management (ESRM) system* to screen lending activities for their potential to harm mangrove ecosystems is a critical first step. Exclusion criteria are a blunt, but useful tool. This can include explicitly excluding financing for activities that result in clearing, degradation, or conversion of mangrove ecosystems. A comprehensive list of sector-specific exclusion criteria recommended by the IFC Sustainable Blue Finance Initiative is available online [here](#).

Apply screen for mangrove-positive outcomes.

Beyond a “do-no-harm” approach, a mangrove-positive investment must demonstrate specific benefits for mangroves, directly contributing to the restoration, protection, and/or sustainable use of mangroves as an integral outcome of the investment (see the definition of mangrove-positive businesses in Section 1 above). Identifying these mangrove-positive microenterprises and activities efficiently is a critical component of developing a mangrove-positive approach. Loan officers should evaluate potential recipients to determine if the proposed use of

ILLUSTRATIVE EXAMPLE



An MFI traditionally lends to small-scale shrimp farmers in Senegal. The portfolio of micro-loan recipients includes farmers whose operations border mangrove ecosystems. The MFI has an ESRM that includes exclusion criteria for activities such as conversion of forest land, however the management of pollutant run-off is not included. By clearly understanding the drivers of mangrove degradation in Senegal, the MFI now identifies unmitigated pollutant runoff from shrimp farms as an exclusion criteria to add to its ESRM, thus ensuring that its lending to small shrimp farmers avoids this particular issue.

It is critical to note that, because exclusion criteria are such a blunt instrument, they can be overly restrictive. The expansion of do-no-harm approaches to cover mangrove ecosystems should be accompanied by tailored technical assistance to ensure that loan recipients can be brought into compliance with mangrove-positive covenants, rather than being fully excluded from financial inclusion approaches.

*NOTE: If the institution does not have an ESRM system, consider whether developing or adopting one would be feasible and attractive to the management team. The International Financial Corporation (IFC) offers extensive resources, including pre-made ESRM templates and specific guidance for different types of financial institutions, available [here](#).

proceeds would finance activities that contribute to the high-level goals of the Mangrove Breakthrough and can be mapped along the Mangrove Transition Curve (A) through (E) in the graphic on page 2. If more detail is required, sector specific use-of-proceeds guidelines should fit with industry-accepted guidance such as that provided by the Asian Development Bank, IFC, and the International Capital Markets Association, available [here](#) on page 6.

Figure 4: Mangrove-positive actions checklist

Mangrove Positive Impact	Illustrative Actions a Business Can Take	Checklist
A Creating value from standing mangroves	<ul style="list-style-type: none"> Adopt business models that protect existing mangrove forests Develop economic activities that rely on standing mangroves to function, such as bird watching tours 	
B Fostering sustainable productive mangroves	<ul style="list-style-type: none"> Develop, source, or finance sustainably-harvested mangrove-derived products 	
C Mitigating and transitioning degrading activities	<ul style="list-style-type: none"> Reduce or eliminate pollutants or land-use practices that degrade mangroves Transition business operations, away from products or activities that actively degrade mangroves 	
D Creating value from mangrove restoration	<ul style="list-style-type: none"> Rehabilitate degraded mangrove ecosystems 	
E Enabling transformation	<ul style="list-style-type: none"> Scale or introduce a new technology or innovation that protects mangroves 	

Actively source opportunities through community outreach. If after screening against the criteria above, there aren't enough mangrove-positive loan applicants in the institution's pipeline or target recipient base, consider actively sourcing options via community outreach through loan officers, extension agents, community-level partners, advertisements and other active sourcing methods employed by the institution. Consider hosting information sessions for communities operating in coastal areas to raise awareness of the pilot approach.

Select pilot microenterprises and activities. Every MFI will have a distinct path to selecting pilot mangrove-positive microfinance recipients. The most important criteria when building a pilot portfolio is to identify microenterprises and activities that have a strong chance of achieving the success metrics defined by the institution in Step 2.1 above. After applying the new screening and intake procedures to determine which loan applicants or existing customers with ongoing financing needs in the current pipeline fit the criteria for mangrove-positive microenterprises and activities, prioritize



those that are most strongly aligned to maximize the likelihood of achieving successful metrics. It is also crucial to establish a clear communication channel with the borrowers to ensure necessary data and lessons learned can be collected on an ongoing basis.

Train relevant loan officers. Successful implementation of the pilot requires that loan officers, who often have significant influence on individual loan decision-making, have a clear understanding of what it means for a business to be mangrove-positive. Training should cover the main drivers of mangrove deforestation and degradation in the target geography, as well as examples of sustainable practices in sectors such as fisheries, aquaculture, tourism, and small-scale Non-Timber Forest Products (NTFP) harvesting. Loan officers should also be equipped to conduct simple, light-touch monitoring during routine client visits, such as observing whether mangrove buffers are maintained, or whether harmful practices (e.g., clear cutting, or polluting) are occurring. Building this knowledge ensures loan officers can both identify promising mangrove-positive activities and provide confidence that financed microenterprises are following best practices.

Provide targeted training and outreach to selected borrowers and communities. MFIs should engage directly with pilot borrowers, and where possible and appropriate with their broader communities, whether they be microenterprises, peer lending groups, or coastal households, to ensure that they understand both the financial terms of the loan and its environmental objectives. While local communities often possess deep, place-based knowledge of mangrove ecosystems, external and contextual factors can prevent this from translating into consistent use of mangrove-positive practices. Targeted training sessions can bridge this gap by introducing practical guidance on mangrove-positive practices, and the loans' environmental covenants. This outreach also helps establish a relationship of mutual information sharing where borrowers are better equipped to meet expectations around the pilot, and MFIs can build confidence in the integrity and impact of their pilot project.

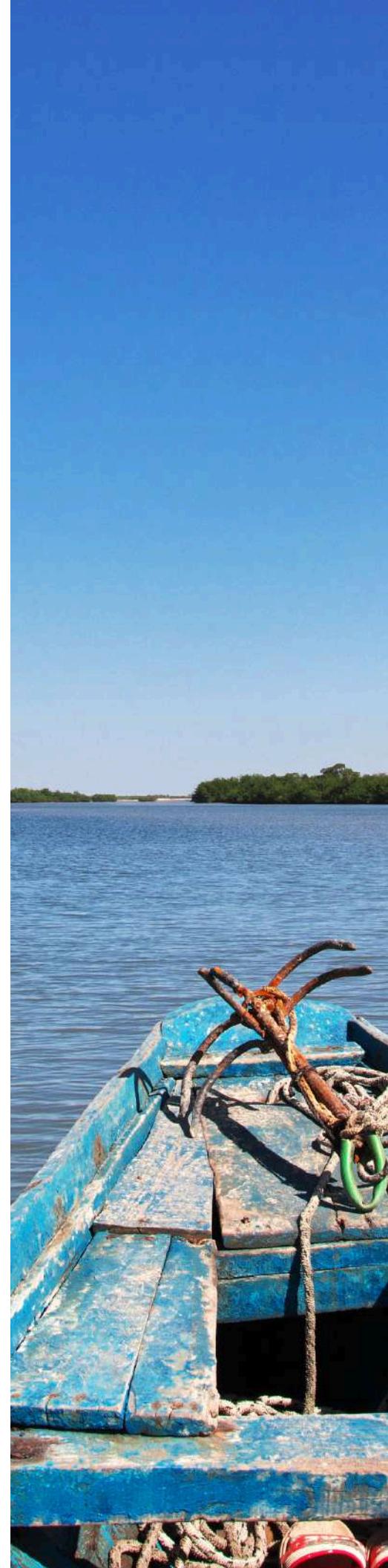
In South Sumatra, Indonesia, a Temasek Foundation grant helped launch a profitable community enterprise restoring degraded mangroves while generating new income for local residents. In Marga Sungsang village, where 10,000 hectares of mangroves were lost between 2014 and 2019, residents faced dwindling livelihoods from illegal wood harvesting and aquaculture expansion. With technical support from CIFOR-ICRAF, the community formed the Mangrove Crab Silvofishery Group, integrating mangrove restoration with aquaculture through a sustainable crab "silvoculture" model, an aquatic form of agroforestry. Using grant funding, they built artificial ponds and purchased crab pots, netting, and seedlings. The ponds rely on mangrove ecosystem services such as filtration and oxygenation, tying business success to ecosystem health. By moving crab harvesting out of mangroves, the initiative reduced habitat damage, relieved pressure on wild populations, and boosted incomes. Within a year the project boosted participants' income significantly, resulting in strong motivation to continue sustainable practices and demonstrating a viable microenterprise that could be supported via microfinance.

2.3 IMPLEMENT AND DOCUMENT THE PROCESS

Design and implement the pilot. At this stage MFIs should carefully design loan products and covenants that balance risk appetite with incentives for participation. To encourage participation, MFIs can consider offering lower introductory or reduced interest rates, grace periods, or performance-based pricing that reward mangrove-positive actions. Embedding such terms into pilot loan structures will allow banks to test both the commercial viability and borrower appetite, generating results that can inform the design of a more long-term mangrove-positive approach. In the long run, the cost of reduced interest rates can be partially offset by avoided defaults through increased resilience of microenterprises or household borrowers in coastal areas, as well as by the upside of generating strong borrower demand for sustainable lending products and connecting with international capital providers with an ocean and or mangrove-positive mandate.

Consider partnering for capacity building support. If capacity building is needed either within the MFI or for borrowers, both at the microenterprise or peer lending group level, consider reaching out to local civil society organizations such as social and environmental non-profits, universities, or international NGOs with coastal environmental conservation programs. These types of organizations are often looking for, or are open to, partnerships with lenders that help them advance their environmental or social objectives, and could be a good resource for sourcing potential investment deal flow.

Create detailed records. Throughout the pilot process, record all decisions and actions to enable systematic evaluation and replication. Documentation should capture decision-making rationale, procedural modifications, stakeholder interactions, and both quantitative and qualitative outcomes. Documentation should record time investments required for enhanced environmental screening and any additional external expertise utilized. Document staff training needs identified during the process, and any interim solutions implemented.



ILLUSTRATIVE EXAMPLE



Record stakeholder engagements. Stakeholder engagement records should capture interactions with household borrowers, peer lending groups, mangrove experts, civil society partners, and regulatory bodies. Note communication strategies that proved effective and areas where additional relationship-building is still needed.

Track financial and operational processes. Monitor loan processing times, additional costs incurred, and any process efficiencies gained. This baseline data will inform cost-benefit analyses for scaling the approach across the institution in Step 3.

2.4 ANALYZE PILOT OUTCOMES

Effective outcome analysis requires systematic data collection, standardized metrics, and regular reporting cycles that include cost-effective monitoring and practical impact assessment tools and frameworks.

Conduct first analysis post loan disbursement. This initial analysis should focus on process compliance. Confirm that loan proceeds are being used for intended mangrove-positive activities, and document any procedural lessons learned during the loan origination process. Capture borrower feedback on the application, approval, and peer lending group establishment processes to refine future procedures. This early engagement phase typically requires monthly check-ins during the first six months to address operational issues before they impact financial and environmental outcomes.

Allow sufficient time before analyzing impact metrics.

Ideally, environmental and biological impact metrics will be analyzed by trained professionals. This could be a member of the institution's staff or a civil society partner. Mangrove ecosystems can require extended timeframes to demonstrate measurable environmental benefits. Avoid the temptation to draw conclusions from short-term data fluctuations, as natural systems exhibit seasonal and cyclical variations that can mislead analysis if not properly

MiBanco is a microlender uniquely positioned to serve coastal populations in Colombia's Pacific Coast mangroves. The institution combines rapid microcredit approval (≈48 hours) with a geo-enabled environmental and social management system that flags risks to protected ecosystems.

A striking example is a materials recovery client in Coveñas, Sucre department, located just 100 meters from the Ciénaga de la Caimanera mangrove. This borrower collects, sorts, and prepares recyclable materials such as metals, plastics, paper, and glass for reuse, directly reducing waste that clogs the sensitive ecosystem. MiBanco's service model enabled this entrepreneur to access affordable credit while supporting environmental conservation.

MiBanco's differentiated approach includes alignment with Colombia's Green Taxonomy, activity aligned financing cycles for fishing communities, and a partnership with Davivienda commercial bank that increases the MFI's access to capital. By pairing fast financing with environmental monitoring and culturally sensitive practices, MiBanco demonstrates how microfinance can simultaneously build livelihoods and protect mangrove ecosystems.

contextualized. Global products that evaluate variation in mangrove cover over time can also be useful, such as [the Global Mangrove Watch](#) or [the Global Intertidal Change Tool](#).

Measure financial metrics in-line with institutional practices.

Apply standard MFI performance indicators to maintain consistency with existing portfolio management processes while recognizing the unique characteristics of mangrove-positive approaches. Monitor traditional metrics including payment performance, peer-group functioning, borrower financial health, and loan-to-value ratios (if relevant) using established institutional reporting cycles and risk assessment frameworks. Document any variations in financial performance patterns compared to the typical microloan in the portfolio.

Step 3. Evaluation & Scaling

Following successful pilot implementation, MFIs can systematically evaluate outcomes and develop strategies for scaling mangrove-positive lending. Guidance in this step will help transform pilot insights into institutional capabilities and links to international funding sources dedicated to nature finance.

3.1 EVALUATE PILOT AND ENSURE INSTITUTIONAL LEARNING

Communicate pilot outcomes. It is now crucial to turn the insights developed through the pilot (Step 2) into actionable recommendations targeting institutional decision makers to secure buy-in for replication and scaling of the mangrove-positive lending approach.

Assess scalability potential. Determine which pilot elements can be replicated through an increase in funding allocated to mangrove-positive microenterprises and activities, and which require adaptation for different market segments, geographic regions, or types of mangrove-impact. Evaluate the pilot's alignment with institutional risk appetite, capital allocation strategies, and growth objectives. Consider whether the mangrove-positive approach has created competitive



If the decision is made to scale mangrove-positive lending, the key elements of the pilot phase will have to be scaled to match the target for mangrove-positive lending.



advantages, new revenue opportunities, or added social and environmental impacts that justify expansion.

Develop standardized project packages. Financial institutions should consider developing standardized project packages for the common mangrove-positive business types in the country, such as ecotourism, fisheries, aquaculture, or waste recycling, to help streamline credit assessment, reduce transaction costs, and ensure consistency across loan types. These standardized project packages might include sector-specific sustainability standards, due diligence checklists, and key performance indicators (KPIs) that align with both national and international best practices. They should also outline information for loan officers regarding business seasonality, simplified monitoring requirements, and technical assistance needs to facilitate efficient loan processing and risk management. If adopted, this approach should be designed with technical inputs from mangrove experts in government or civil society.

Calculate return on investment for mangrove-positive approach. Quantify the total cost of implementing the pilot program, including staff time, training expenses, sourcing of recipients, and enhanced screening procedures. Compare these costs against any financial benefits measured, such as improved loan performance, potential to access new markets, avoided loss, regulatory compliance value, and reputational benefits. This analysis will inform business case development for board-level expansion approval.

IF THE DECISION IS MADE TO SCALE MANGROVE-POSITIVE LENDING, THE KEY ELEMENTS OF THE PILOT PHASE WILL HAVE TO BE SCALED TO MATCH THE TARGET MANGROVE-POSITIVE LENDING.

Implement a training program. Based on pilot experiences, develop tailored staff training curricula. Loan officers require training on mangrove business model evaluation, understanding the opportunities for mangrove-positive lending, and ecosystem services valuation. Risk management teams require training on the new policies and procedures for ESRM or other do-no-harm procedures. Executives and board members should be made

Which roles in your institution do you think would require or benefit from additional capacity building to institutionalize a mangrove-positive lending approach?



aware of the new mangrove-positive approaches, benefits to investing in mangrove conservation, restoration, and sustainable use, and provided with talking points to ensure proper messaging.

Adopt standardized tools and frameworks. Integrate proven assessment tools from the pilot phase into operating procedures for the expanded microfinance offering. This includes updated loan intake procedures such as geospatial mapping tools for identifying mangrove-adjacent businesses, ESRM, or other screening approaches, and standardized reporting templates. Consider adopting internationally recognized standards such as the [Green and Social Bond Principles and Sustainability Bond Guidelines](#) to align with global best practices and facilitate international partnerships.

Build internal expertise network. Identify and develop internal “mangrove champions” to serve as mangrove finance specialists across different business lines. Create cross-functional teams that include representatives from credit, risk, sustainability, and business development to ensure an integrated approach to mangrove-positive lending. Establish regular knowledge-sharing sessions to disseminate lessons learned and best practices. This network of mangrove champions is crucial to successfully scaling and sustainably managing the mangrove-positive lending approach.

Seek outside support. Staff capacity building is a good opportunity to start building partnerships with local civil society organizations. The guidance in this roadmap strives to be widely applicable, however the specific dynamics of coastal investments in any geography can vary significantly. Local social and environmental non-profits, academic programs, and international NGOs with local presence can all be good resources for staff capacity building. Reaching out to representatives from civil society organizations that deal with mangroves can be important also for future interactions including potential additional training, pipeline identification, data collection, and investment monitoring support.





ILLUSTRATIVE EXAMPLE

In Casamance, Senegal, a local microfinance institution, Caurie Microfinance, issued CFA 325,000 (approximately USD \$577) microloans to two women entrepreneurs engaged in sustainable oyster harvesting. Formerly members of an oyster cooperative, the borrowers harvest oysters in two seasons, earning roughly CFA 35,000 (USD \$62) per three-day cycle through local market sales. Thanks to concessional capital provided through a donor-backed initiative, Caurie Microfinance was able to offer a reduced interest rate of 8%, compared to its standard 15%. This lower cost of borrowing made it possible for the women to maintain and grow their oyster businesses while investing in complementary income-generating activities such as small-scale farming, gardening, and trading. Oyster harvesting depends entirely on healthy mangrove ecosystems, where larvae attach to mangrove roots for shelter and growth. By keeping their enterprises viable through affordable financing, these microloans not only strengthened household resilience but also helped sustain a growing ecosystem of mangrove-positive businesses that rely on and sustainably use the surrounding mangrove forests.

3.2 ACCESS INTERNATIONAL CAPITAL AND GLOBAL PARTNERSHIPS

While the benefits from mangrove-positive lending should yield returns to the institution in terms of avoided risk and revenue generation from new or expanded product lines, it may take time to demonstrate the precise return on investment. Blended finance approaches that incorporate concessional funding (e.g., low-cost public funding, results based finance, or philanthropic grants) can help overcome some of the barriers to mangrove-positive lending and serve as a funding bridge to help build the case that investing in mangroves is a financially sustainable endeavor. Structuring a mangrove-positive blended finance arrangement can generate liquidity and reduce financial risk. In some cases, grant capital can forge technical partnerships by funding technical assistance for both borrowers (to increase environmental impacts) and for the institution (to train staff and build internal capacity). Steps to consider for structuring a blended finance product that manages portfolio risk and scales institutional lending for mangrove-positive microenterprises and activities are:

Determine need for blended capital. Based on the results of the pilot project, assess the remaining risks or gaps that need to be addressed in order to scale up. Were default rates or transaction costs too high? Was the interest rate target too low? Is the institutional capital constrained or over its allocation in the sector under which mangrove-positive lending falls? Are there perceived risks from upper management levels that are preventing them from buying in? Does the MFI lack the capital to open a new product line? Answers to these questions will help identify the risks and the type of blended finance that will be most appropriate to mitigate them.

Figure 5: Blended finance solutions for risks to financial institutions

Risk	Blended Capital Solution
High default rates	Loan guarantees or subordinated debt (first loss)
Interest rate too low to cover costs/be profitable	Low interest debt, grants to cover startup/scale up costs
Capital constraints	Low interest debt or line of credit off the bank's balance sheet



ILLUSTRATIVE EXAMPLE

Map domestic, regional and international funding opportunities. Once the major risks and funding gaps have been identified, the next step is to identify domestic, regional and IFIs, multilateral development banks (MDBs), development finance institutions (DFIs), and impact investors that prioritize mangrove conservation, restoration, and sustainable use. Key sources include the World Bank Group, regional development banks, and bilateral development agencies with sustainable finance mandates. Multinational banks that have public climate, nature, or other sustainability commitments should also be considered. Research specific eligibility criteria, application processes, investment modalities, and partnership requirements for each institution, to identify which international institutions offer strong partnership potential.

Participate in regional and international initiatives and networks. Join or follow networks such as the Sustainable Blue Economy Finance Initiative, the Natural Capital Finance Alliance, and regional banking associations focused on environmental finance. These platforms provide access to market intelligence, technical resources, and potential co-investment opportunities while enhancing the institution's visibility among international partners.

Develop tailored concepts for blended approaches. To attract international capital, MFIs should prepare concept notes that combine financial and environmental performance targets. These should document pilot results including repayment rates, portfolio performance, and mangrove-related impacts, while demonstrating institutional

In Sri Lanka, a partnership between international NGO Seacology and local organization Sudeesa demonstrates how microfinance can drive mangrove conservation. Prior to 2015, Sri Lanka's mangrove forests faced severe pressure from coastal communities who depended on mangrove harvesting for construction materials, fuelwood, and charcoal production due to limited livelihood alternatives.

The Seacology-Sudeesa Sri Lanka Mangrove Conservation Project addressed this through an innovative microfinance model linking economic opportunity to conservation outcomes. The program provided business training and interest-free microloans averaging Rs10,000 (\$67 USD) to women in 1,500 communities adjacent to mangrove forests. In exchange, each community committed to protecting an average of 21 acres of mangrove forest.

Operating through Community Beneficiary Organizations (CBOs), over 14,000 community members completed business trainings before approximately 12,000 received microloans to establish or expand businesses. This community-controlled lending structure had built in social governance and conservation requirements crucial for sustainability. Participants used microloans for diverse small businesses that reduced dependence on mangrove extraction. For example, Sumeda Malani in Kurakkanhena village used her Rs10,000 loan to purchase sweets production equipment, creating steady family income and viable alternatives to resource extraction.

Beyond protecting existing mangrove cover, the initiative replanted 9,600 acres using seedlings from three purpose-built nurseries and constructed the country's first mangrove museum to build long-term conservation awareness and technical capacity.

capacity for originating, monitoring, and reporting on mangrove-positive microenterprises and activities supported. International funders require clear evidence of environmental impact measurement, portfolio tracking, and regulatory compliance capabilities. Concept notes should also include updated market analysis showing client breadth and lending scalability, plus pitch materials highlighting pilot results, staff credentials, and partnerships with technical service providers. These materials collectively establish MFI credibility to deliver measurable conservation and livelihood outcomes.

Negotiate use-of-proceeds credit facilities, guarantees, or low-interest debt. Approach identified best-fit national, regional and international financial institutions to establish credit facilities with defined use of proceeds specifically for mangrove-positive microcredit. These arrangements allow partner institutions to support environmental outcomes while leveraging local MFIs' market knowledge and borrower relationships. Structure these facilities with clear covenants requiring proceeds to fund mangrove-positive activities as defined by the screening criteria developed in Step 2.

Negotiate technical assistance components. Many international funding partners (DFIs, MDBs, impact investors, etc.) can provide technical assistance alongside liquidity arrangements, including staff training, risk management system enhancement, and environmental impact measurement support. These technical components add value beyond capital provision and help strengthen the institution's long-term capacity for green microfinance.

3.3 ESTABLISH MONITORING, REPORTING, AND CONTINUOUS IMPROVEMENT

Implement comprehensive monitoring systems. Develop systematic approaches for tracking both financial and environmental performance across the mangrove-positive portfolio. Establish regular reporting cycles that capture loan performance metrics, environmental outcome indicators, and portfolio risk assessments.



**Develop environmental outcome verification procedures.**

Establish partnerships with environmental monitoring organizations, academic institutions, or specialized consultancies that can provide third-party verification of environmental claims and outcomes.

Establish feedback loops for continuous improvement.

Create mechanisms for incorporating lessons learned from ongoing lending activities into policy and procedure updates. Regularly review and update screening criteria, risk assessment tools, and environmental impact measurement approaches based on emerging best practices and scientific understanding. Maintain active engagement with the broader sustainable finance community to stay current with evolving standards and opportunities.

3.4 REGULATORY ALIGNMENT AND POLICY ADVOCACY

Ensure compliance with evolving regulations. Stay current with developing environmental regulations, international standards, and disclosure requirements that may impact mangrove-positive lending. Regularly review and update internal policies to maintain alignment with changing regulatory landscapes, particularly regarding climate risk disclosure, nature-related financial risk reporting, and sustainable finance taxonomies.

Engage with regulatory authorities. Participate in regulatory consultations and industry working groups focused on environmental finance and sustainable banking practices. Share lessons learned from mangrove-positive microfinance implementation to inform policy development and advocate for regulatory frameworks that support environmental finance growth while maintaining prudential banking standards.

Contribute to industry best practice development. Share experiences and lessons learned through industry publications, conference presentations, and peer banking networks. Contribute to the development of industry standards and best practices for mangrove and coastal ecosystem microfinance, helping to create a knowledge base that fosters increased attention to financial inclusion for mangrove-positive outcomes.

Mangrove conservation in the Philippines is guided by a well-established but often fragmented policy framework. The Philippine Fisheries Code (RA 8550, amended by RA 10654) designates mangroves as critical fish habitats and prohibits their conversion without proper clearances. The Wildlife Resources Conservation and Protection Act (RA 9147) reinforces this by protecting critical habitats from destruction, while the Local Government Code (RA 7160) devolves day-to-day coastal management to Local Government Units (LGUs), empowering them to enact local ordinances, collect environmental fees, and enforce conservation rules. While the regulatory environment provides a strong legal foundation for mangrove protection, navigating the enforcement of the regulations and overlapping regulatory mandates across multiple government agencies could prove challenging for financial institutions, and require proactive regulatory engagement.

List of Tools Recommended in the Roadmap

CATEGORY	TOOL
Interactive mangrove location and extent maps	Global Mangrove Watch Restor
Interactive coastal risk maps	ENCORE (Exploring Natural Capital Opportunities, Risks, and Exposure) . ORRAA Coastal Risk Index tool AXA Coastal Risk Index tool Ocean Ledger
Environmental and Social Risk Mitigation (ESRM) Tools	Recommended ESRM exclusion list for sustainable ocean finance from the IFC Sustainable Blue Economy Program IFC Environmental and Social Management System (ESMS) Implementation Handbook
Mangrove key performance indicators (KPIs)	The Global Oceans Accounts Partnership
Other tools	The Taskforce for Nature Related Financial Disclosures (TNFD) tool catalogue

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