



Showcasing the Regional Flyway Initiative (RFI) Nature Credits Case Studies, with focus on the Philippines

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ADB Regional Flyway Initiative Nature Credits Study

Project Overview & Key Findings
from Philippines

**Knowledge Sharing on
Biodiversity and Nature Credits**
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The RFI Nature Credit Study



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Study Aims & Objectives

- 1** Explore market-based mechanisms (specifically Nature Credits) to finance wetland protection, restoration, and community stewardship.
- 2** Evaluate whether Nature Credit finance can deliver sustainable, scalable funding beyond grants or public subsidies.

Structure of the RFI Nature Credits Study

The study's First Phase developed the conceptual foundations, defining:

What Nature Credits are, and:

How they differ from carbon credits

How they could apply to the RFI's wetland ecosystems

The Second Phase built an actionable framework for country pilots in:



Bangladesh



The Philippines



Thailand

Analyzing site-specific data and in-country market capacity to test feasibility of Nature Credits.

Phase 1 Highlights: Nature Credit Design Principles



Mechanism must be structured to explicitly **mobilize private-sector capital** toward verifiable conservation, restoration, or enhancement outcomes



Credits should align with **buyers' business incentives**, not just philanthropic interest.



Credits must represent **measurable ecosystem gains** beyond a baseline, not just effort or investment.



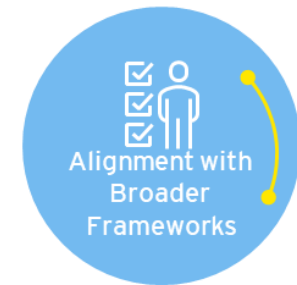
Credit valuation should account for the **size or extent** and ecological significance of the protected or restored area.



Balance scientific **rigor** with the **cost-efficiency** of the crediting process.

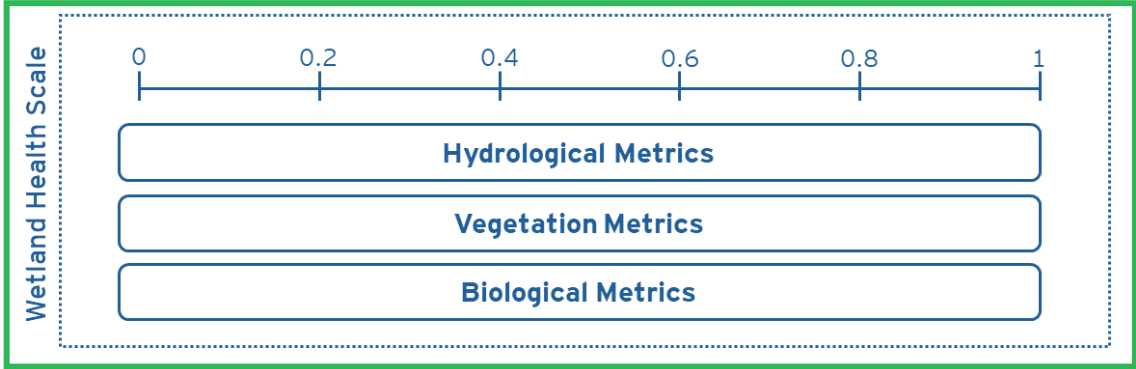
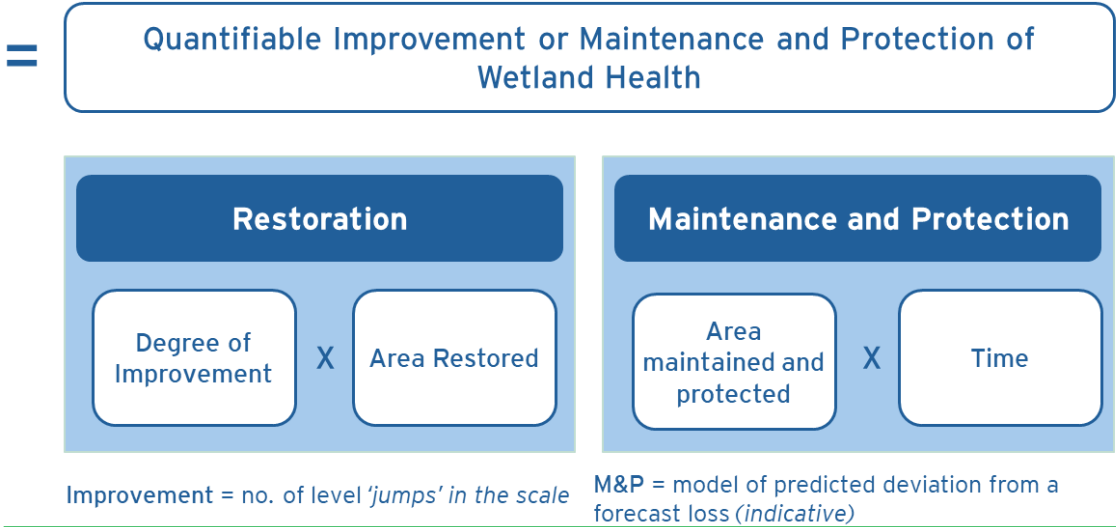


Credits must respect community rights and livelihoods, integrating **social safeguards** into design.



Examine **interoperability** with global standards (e.g., BCA), while avoiding excessive complexity.

Phase 1 Highlights: Activities & Archetypes



Hydrological Function Metrics

- Hydrological regime, (supports seasonal / year-round wetland dynamics- consistent with ecosystem type), tidal amplitude soil moisture, hydrological connectivity

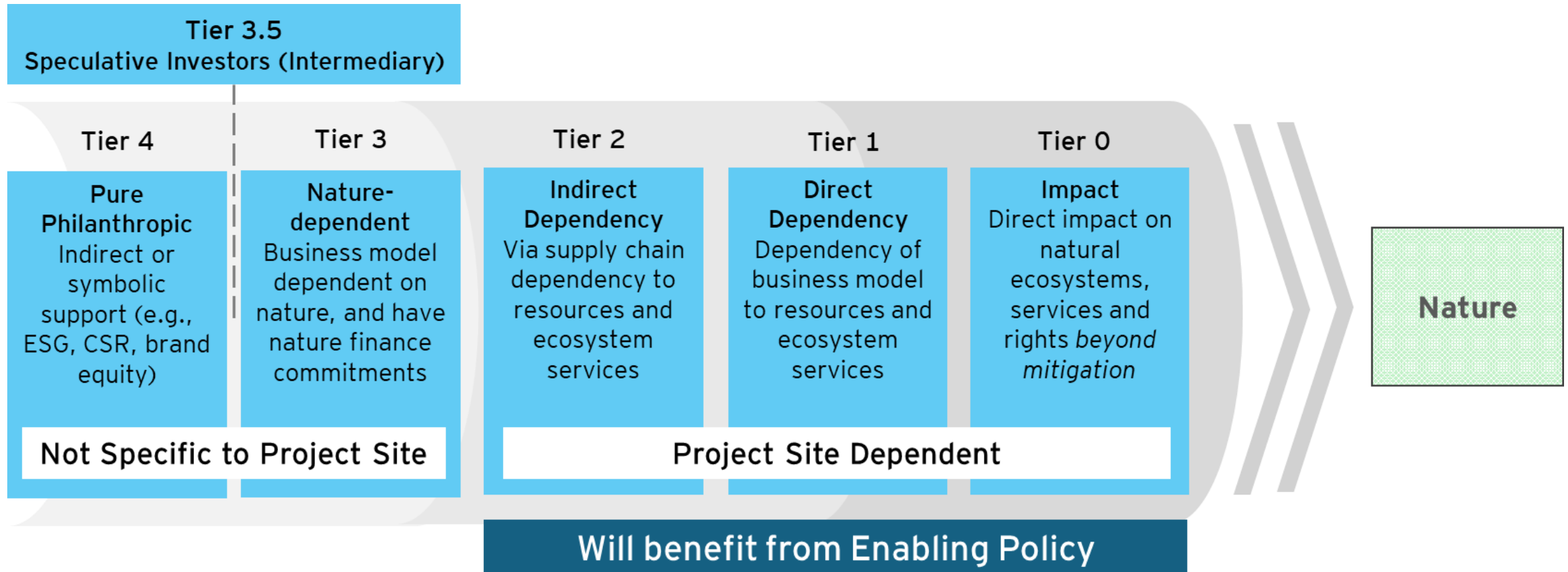
Vegetation Cover Metrics

- Invasive species dominance, habitat complexity, native regeneration

Biological (Key species/ population) Metrics

- Habitat Suitability Index (HSI) scores
- Sighting incidence of waterbirds / indicator fauna, presence of breeding individuals, species richness, presence of threatened species or population

Phase 1 Highlights: Willingness to Pay



Country Case Studies



Phase 2 included deep-dive on three RFI pilot countries: Bangladesh, The Philippines, and Thailand

- 1 Country-specific feasibility assessments linking wetland types, governance, and market potential;
- 2 Potential pilot project blueprints to be co-designed with local partners;
- 3 Capacity and policy gap analysis; and
- 4 A regional roadmap for scaling high-integrity nature credit markets under ADB’s RFI platform.

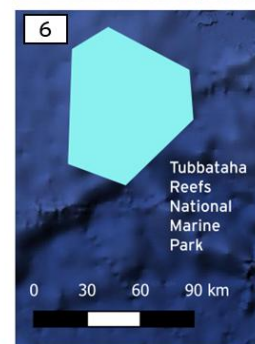
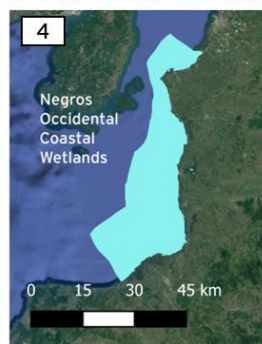
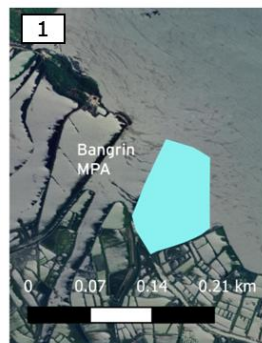
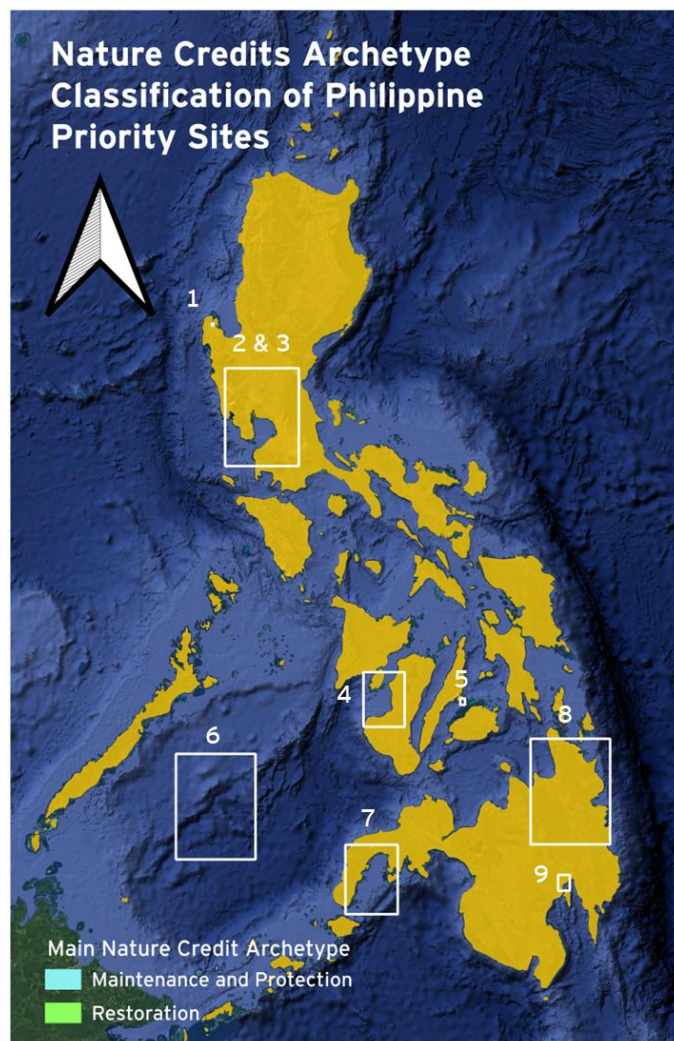


Philippines

Number of sites	12 priority wetlands sites identified
Key strengths	Strong ecological assets and identifiable market linkages. Priority wetlands support fisheries, agriculture, tourism, aquaculture and other nature-dependent livelihoods and businesses, creating potential demand from actors with direct and supply-chain dependencies.
Likely archetypes	Predominantly Maintenance & Protection, with Restoration.
Policy opportunity	Build from existing rather than create a market from scratch. Philippines has biodiversity and climate strategies, international commitments, environmental safeguards and emerging green-finance infrastructure.
Challenges	No dedicated nature-credit framework or single governing authority.



Restoration and Protection Priorities



Across Philippine wetlands, ecosystem conditions and crediting potential are shaped by pressures such as aquaculture expansion, coastal and industrial development, tourism, land conversion, pollution, and hydrological change.

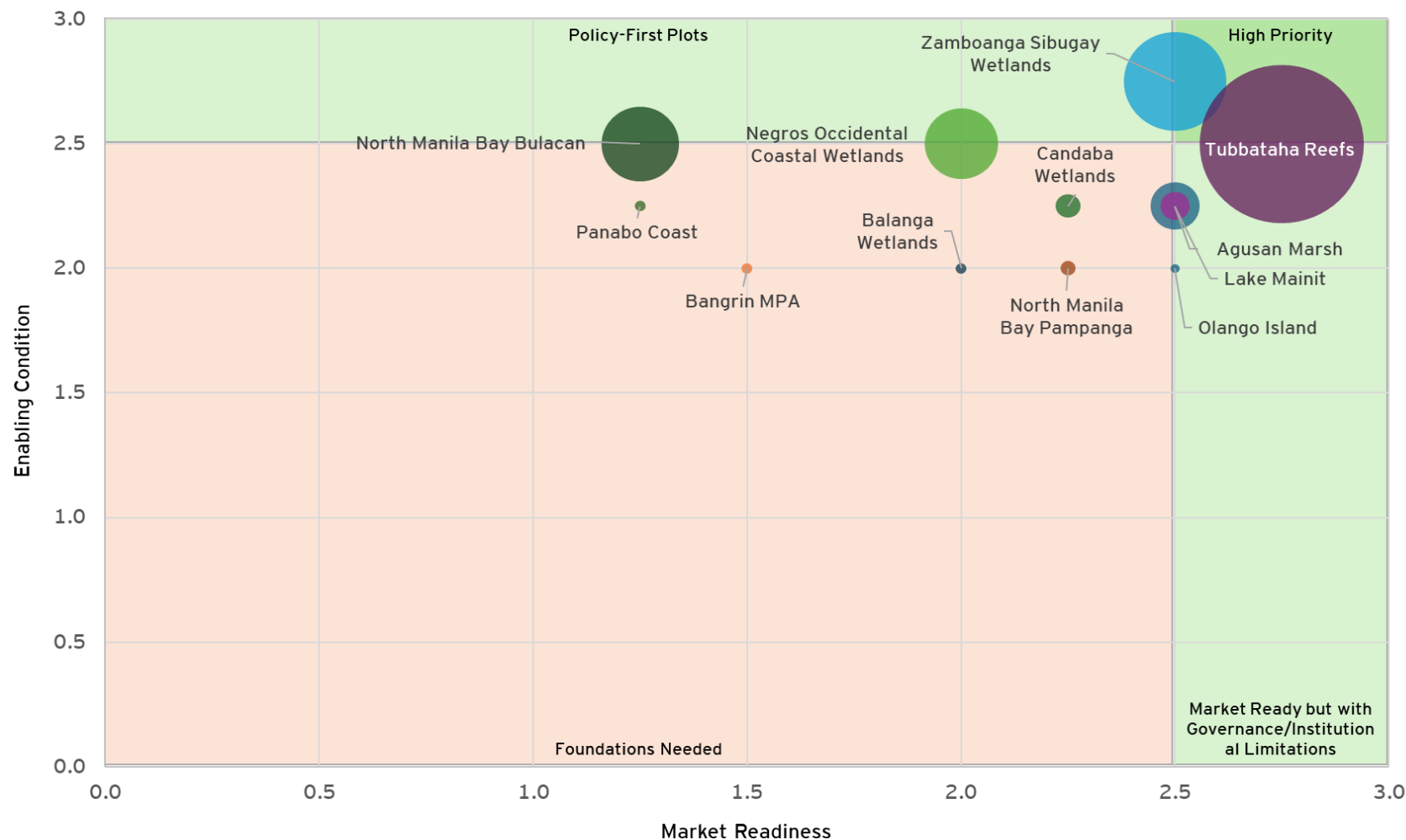
- The **Restoration Archetype** best applies to North Manila Bay (Bulacan) due to its high additionality and severely degraded condition driven by intensive human activities, including land reclamation, aquaculture, and infrastructure development.
- Sites such as Tubbataha, Agusan, and Balanga are better suited for a **Management and Protection Archetype**, where strengthened stewardship and governance can help prevent further ecological decline.
- Although Candaba shows a strong need for restoration, the **predominance of privately owned land alters the feasible approach** for nature credits. Based on consultations, Candaba would benefit more from restoration aligned interventions that emphasize sustainable livelihood innovations.

Note: Both archetypes may occur within each site. The archetype shown reflects the dominant condition based on current data and **does not imply that the entire area is suitable for project development**. Further on-site validation and feasibility assessment are required before any crediting activity.



Prioritization Matrix

Green shaded areas indicate the upper quartile (scores ~2.5–3.0) on each axis, representing the highest-performing segments.



Note:

The **size (diameter)** of each circle represents the relative area of the site. Larger circles indicate sites with greater area, while smaller circles represent smaller sites, allowing easy comparison across locations.

Scoring scale (applies to both axes)

- 0 – Not evident / No readiness
- 1 – Low / Emerging
- 2 – Moderate / Developing
- 3 – High / Mature / Strong performance



Demand Driver Analysis

Preliminary mapping of economic dependencies on the priority sites show direct and indirect linkages of domestic and global corporates to the ecosystem services provided in these sites, as well as small-to-medium scale enterprises.

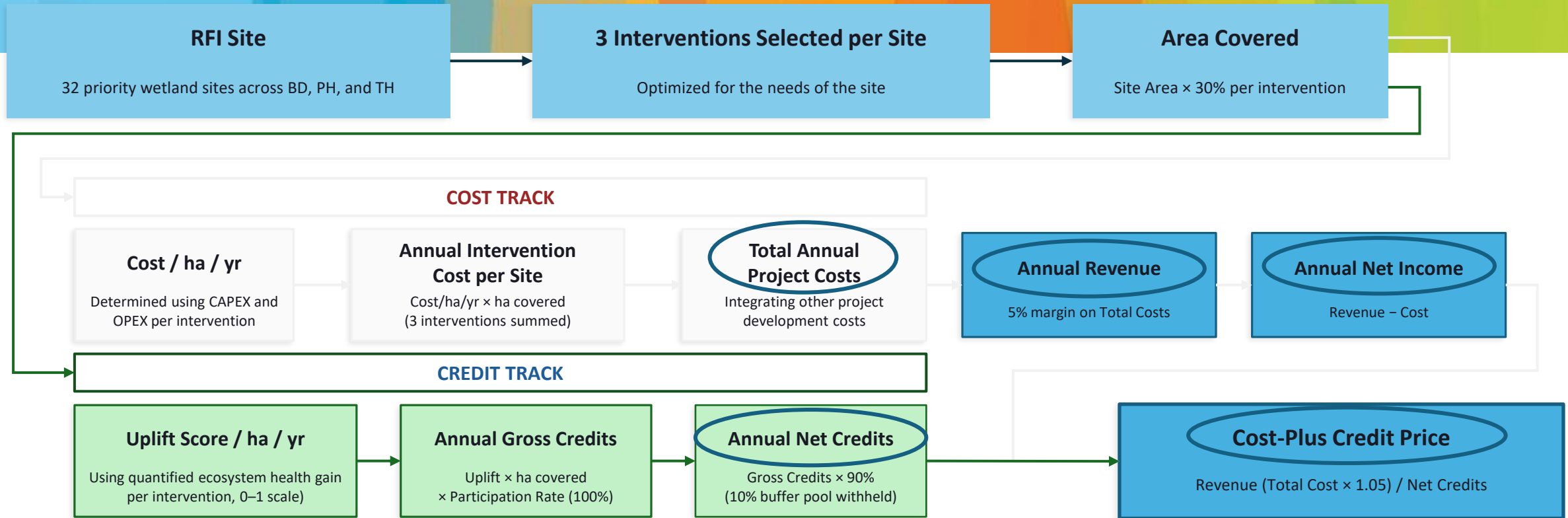
Wetland Group	Not Specific to Project Site		Specific to Project Site		
	Tier 4 Pure Philanthropic/ Indirect / Symbolic Support	Tier 3 Nature Dependent Business Model	Tier 2 Supply Chain Dependency	Tier 1 Direct Dependency	Tier 0 Residual Impacts / Offsetting
Inland Wetlands (Candaba; Lake Mainit; Agusan Marsh)	Banks, insurers, CSR, climate and green finance	Agri-finance, climate- resilient farming, hydropower, ecotourism (e.g., Lake Mainit energy, Candaba agri systems)	Agro-processing, rice logistics, irrigation services, energy supply chains	Farmers, fisherfolk, duck raisers, and flood- dependent livelihoods (e.g., Candaba seasonal systems, Agusan flood-pulse agriculture)	Mining, logging, land conversion, runoff pollution, hydrological disruption (e.g., Agusan, Lake Mainit)
Coastal Wetlands (Bang Pu, Khok Kham, Khlong Tamru, Pak Thale–Laem Phak Bia, Pak Nam Prasae, Khlong Yai, Krabi River Mouth, Phang-nga Bay, Ko Libong–Hat Chao Mai)	Corporates, ESG/blue finance, tourism investors supporting conservation and CSR	Tourism, hospitality, ports, shipping, and dive/liveaboard industries reliant on reef and coastal ecosystems (e.g., Olango ecotourism, Tubbataha dive tourism)	Seafood processing, aquaculture, crab/salt value chains, mariculture systems (e.g., Negros crab industry, Panabo mariculture)	Fisheries, aquaculture operators, crabbers, and coastal communities dependent on mangroves, reefs, and water quality (e.g., Bangrin, Zamboanga Sibugay)	Reclamation, port/airport expansion (Bulacan), industrial pollution (Manila Bay), mangrove conversion, overfishing



Nature Credit Readiness Assessment

Pillars	Enabling Condition	Status	Implications for Nature Credit Mechanism
Market Incentives	Drivers for Market Participation	Existing	Existing fiscal tools (e.g., Renewable Energy Act, Green Jobs Act, SIPP) show strong government support for green sectors but remain carbon-focused.
Legal and Policy Foundations	Strategic Policy Frameworks	Emerging	National strategies (PBSAP, PDP, NCCAP, SFTG) align biodiversity and climate goals but lack operational pathways for crediting.
	International Recognition and Alignment	Existing	International commitments (UNFCCC, CBD, Ramsar, CMS) enhance credibility and alignment with global standards.
	Dedicated Legislation for Nature Credits	Gap	Strong environmental laws exist but no formal framework governs biodiversity credits. This creates uncertainty around ownership, verification, and enforcement, highlighting the need for clear legislation to enable market confidence.
Standards, Metrics, and Market Infrastructure	Project Eligibility and Standards	Emerging	Existing standards are largely carbon-centric and provide a partial foundation.
	Standards, Metrics, and MRV	Emerging	Strong biodiversity monitoring and carbon MRV systems exist but remain fragmented.
	Operational Credit Registry or Exchange	Emerging	Registry systems exist for energy and carbon but not for biodiversity credits.
Governance and Institutions	Oversight Mechanism / Designated Authority	Emerging	Multiple agencies have relevant mandates, but no single authority governs nature credits.
	Cross-Sectoral Coordination	Emerging	Coordination platforms exist but mandates remain fragmented across sectors.
Social Equity and Safeguards	IPLC Engagement and Benefit-Sharing	Existing	Legal frameworks (e.g., IPRA) support tenure and participation, but guidance for biodiversity credit benefit-sharing is limited.
	Safeguard Policies and Trade-off Management	Existing	Established safeguard systems (EIA, DENR guidelines, IFC/ADB standards) provide a solid base. Integrating credit-specific risks (e.g., permanence, leakage) will be critical to ensure integrity.

Credit Value: Calculation Framework



Willingness-to-Pay Scenarios

01 Mapping Interventions to their Credit Type

Each selected intervention is mapped to credit type. For example:

1. Mangrove interventions → Blue Carbon
2. Patrolling → Biodiversity
3. Community-based Management → Bundled (Carbon and Biodiversity)

02 Determining Per-Scenario Pricing Values for each Credit Type

For each credit type, five key price percentiles are derived from a library of real market pricing values (based on documented project transactions), representing Bear through Premium scenarios.

03 Credit-Volume Weighted Blend

For each scenario, the three interventions' prices are blended by net credit volume:

$$\text{Blended Price} = \frac{\sum (\text{Price} \times \text{Net Credits per intervention})}{\text{Total Net Credits}}$$

To get whole-country Willingness-to-Pay percentiles:

Each site's three intervention prices (per scenario) are first blended by their individual net credit volumes. Country averages are determined by volume-weighting across all sites; larger sites (more annual credits) have proportionally greater influence on the country figures.



Assumption-based Credits Generation

Site Name	Total Annual Project Costs	Annual Net Credits (post-buffer)	Annual Revenue	Annual Net Income	Cost-Plus Credit Price
Candaba Wetlands	\$953,159	4,853.7	\$1,000,817	\$47,658	\$206.20
Agusan Marsh Wildlife Sanctuary	\$3,835,496	18,759.3	\$4,027,271	\$191,775	\$214.68
Lake Mainit	\$1,540,522	4,156.8	\$1,617,548	\$77,026	\$389.13
North Manila Bay (Bulacan)	\$16,656,516	67,929.3	\$17,489,342	\$832,826	\$257.46
Olango Island Wildlife Sanctuary	\$284,521	522.8	\$298,747	\$14,226	\$571.47
Tubbataha Reef Natural Park	\$33,119,919	97,340.6	\$34,775,915	\$1,655,996	\$357.26
Zamboanga Sibugay Wetlands (Kabasalan Siay Wetland Area)	\$16,043,902	66,408.6	\$16,846,097	\$802,195	\$253.67
Negros Occidental Wetland Conservation Area	\$8,094,515	33,871.8	\$8,499,240	\$404,726	\$250.92
North Manila Bay Pampanga (Sasmuan Coastal Wetlands)	\$353,237	1,483.9	\$370,899	\$17,662	\$249.95
North Manila Bay (Bataan)	\$5,373	19.8	\$5,642	\$269	\$284.31
Bangrin Marine Protected Area	\$7,659	28.8	\$8,042	\$383	\$279.40
Panabo Coast	\$165,208	710.3	\$173,469	\$8,260	\$244.23

 Inland wetlands	 Coastal wetlands
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Willingness to Pay	Bear	Base	Central	Bull	Premium
Philippines	\$10.67	\$14.57	\$18.72	\$23.16	\$30.49

Key Takeaways

- 1) The **RFI Nature Credit Study** represents **ADB's most comprehensive exploration of market-based conservation finance** to date.
- 2) Nature credits offer a **pathway to mobilize private finance** while reinforcing community stewardship and ecological integrity.
- 3) Success will depend on **balancing scientific rigor, market functionality, and social legitimacy**.
- 4) Work underway to determine **total nature credit generation value and value forecasting per site**.
- 5) A suggested next phase would **test feasibility across selected sites in Philippines** focusing on governance, MRV readiness, and buyer engagement.

Regional Flyway Initiative DATA ROOM

147 RFI PRIORITY
WETLAND SITES



RFI SITE STUDIES

