

Sustainable Financing for Blue Carbon Projects

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Introduction

What you do makes a difference, and you have to decide what kind of difference you want to make.

– Jane Goodall

PAIN POINTS

- Lack of benchmarks and financing precedent;
- Inability to quantify and price ecological co-benefits;
- High perceived investment risk due to delayed cash flow visibility and absent pricing models;
- Extreme regional variability across macro-environmental and regulatory landscapes;
- Absence of standardized baseline protocols, preventing cross-project comparability;
- Severe operational bottlenecks in scaling portfolios into uniform, institutional assets;
- Transitioning from a one-time CAPEX mindset to managing a dynamic, multi-decade asset;
- High expenditure and skills required for continuous MRV and auditing;
- Long-term "permanence risks" and continuous community alignment;

Financing

Blue Carbon Projects

Sustainable

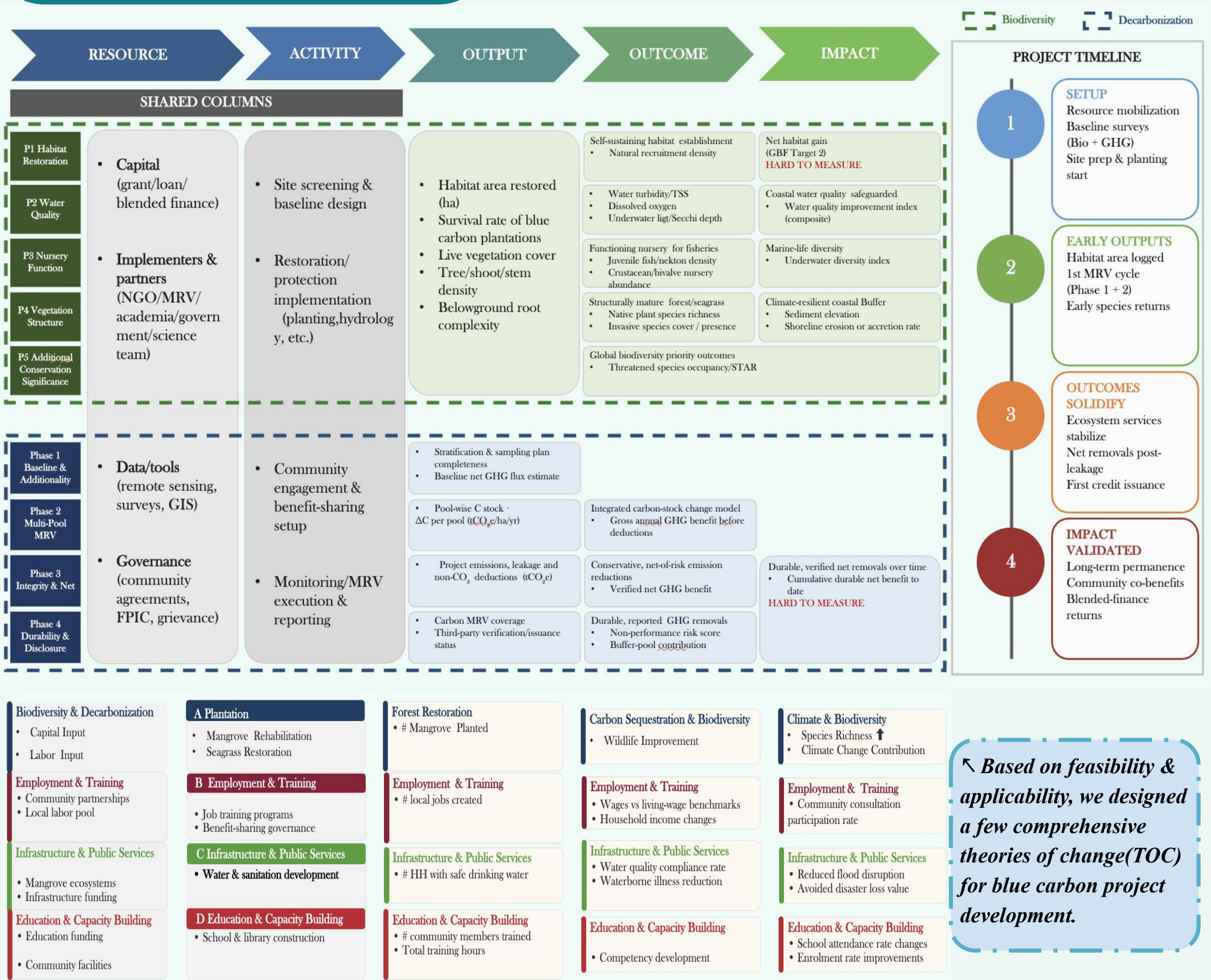
SOLUTIONS

Translate the widely recognized value of community and biodiversity benefits into a concrete premium

Develop a generalizable approach that works in assessing Blue Carbon projects in SEA

Clarify what each project phase entails and which indicators to monitor

Methodology



Climate	Total Carbon Credit Value = Credits Issued * Carbon Credit Price
Community	Training Programme Community Value Created by Training = #People engaged in Training * Annual Wage Proxy * Livelihood Conversion Rate
	Basic Education Education Income Premium = #Students engaged in Basic Education * (1-Dropout Rate) * Annual Income Premium * Working Years
	Healthcare & Well-being Medical Cost Savings = #Cases Reduced * Average Medical Cost Productivity Savings = #Patients Reduced * Working Age Share * Days off Work * Daily Opportunity Cost of Time
	Infrastructure & Resources Commuting Cost Savings = #Commuters * Average Commuting Time Saved * VOT
Biodiversity	Biodiversity Value = Rehabilitated Area * Biodiversity Value per hectare

Monetization Financial Proxy Framework & Calculation Logics

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Conclusions

Integrated Benefits of a blue carbon project can be allocated into Climate, Community & Biodiversity.

According to what we have researched, in order to sustain blue carbon projects internally and externally, we call for a standardized monetization framework in the market, justifying in three perspectives:

- Project developer:** To verify what they have input and expected to create value; instead of waiting for voluntary but uncertain fundraising, developers are more incentivized to avoid greenwashing and attract high-quality and continuous capital;
- Investors:** To phase out greenwashing risks, quantitative tools may support investors in meaningful decision-making;
- Capital market:** As more and more impact investors appear, standardization is undoubtedly significant; figures may pose skeptics, while investment logics remain convincing.

Results



Measurement KPI Priority Classification & Examples

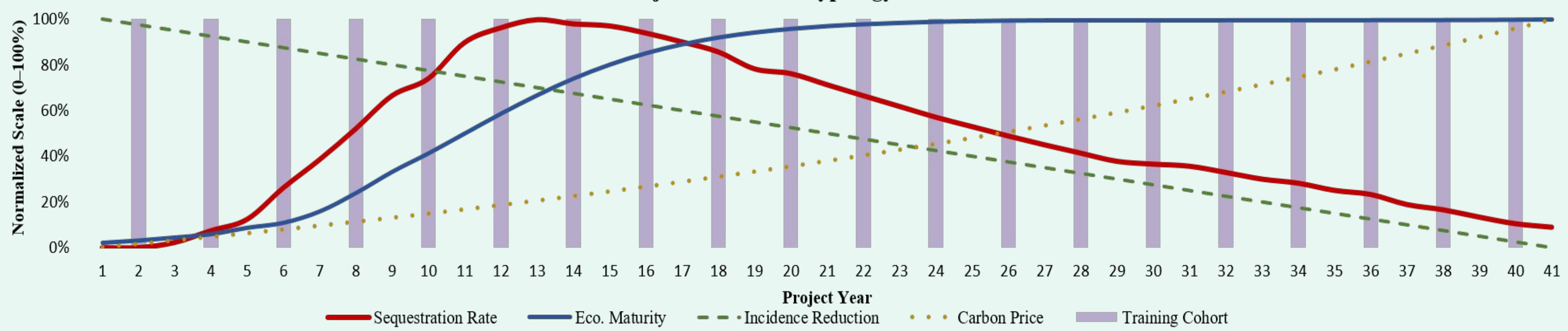
Baseline & Setup	1st Verification Cycle	Mid-term Monitoring Cycle	Long-term Permanence
Climate Carbon baseline estimation	Initial carbon tracking & leakage deduction	Carbon MRV & net GHG verification	Long-term SOC & non-permanence risk tracking
Community FPIC & Baseline Survey	Infrastructure delivery & skills training	Livelihood income stabilization & disaster resilience	Corporate formalization, water security & well-being
Biodiversity Water, sediment, land-use analysis	Sapling survival, area tracking & shoreline stability	Canopy, habitat connectivity & fish density monitoring	Threatened species (STAR) & ecosystem sustainability

Project Implementation Timeline & Core Activities

CCB	Indicator	Projection Type	Bull	Bear
1	Carbon Sequestration	Bell Curve	Rate peak 23.8 tCO ₂ e/ha Price \$29.30 → \$78.67	Same rate curve Price \$29.30 → \$60.44
2	Healthcare Incidence	Decline	3% → 1%; cost \$107.40 Pop 1,000 +1%/yr	2% → 1%; cost \$107.40 Pop 1,000 +1%/yr
3	Training Value	Biennial Pulse	90 trainees, conv 80% Wage \$286/mo	90 trainees, conv 50% Wage \$115/mo
4	Education Premium	Delayed Onset (Y5)	200 students, 9.5% Dropout 20%	150 students, 7% Dropout 30%
5	Commuting Savings	Growth	Commuters 30% Cost \$0.81/trip	Commuters 20% Cost \$0.33/trip
6	Biodiversity Value	S-Curve	Full maturity \$526/ha Inflation 2.5%/yr	Full maturity \$526/ha Inflation 2.0%/yr

Monetization Framework Projection Types

Projection Pattern Typology



Bear Case

Integrated Return on Investment (IROI):

0.39

Every \$1 can generate \$0.39 integrated benefits (carbon credits sales, community benefits & biodiversity values)

Assumed Investment:

\$1,200,000

Integrated Value:

\$500,000

Assumptions

Project Location	South-east Asia
Project Coverage	13.24 Hectare
# Beneficiaries	~1,000
Inflation Rate	2% - 2.5%
Social Discount Rate	8% - 12%

Bull Case

Integrated Return on Investment (IROI):

1.09

Every \$1 can generate \$1.09 integrated benefits (carbon credits sales, community benefits & biodiversity values)

Assumed Investment:

\$2,600,000

Integrated Value:

\$2,800,000

Declaration: All assumptions are based on robust future projections and clear Theories of Change(TOC). All input data and financial proxies can be adjusted and replaced according to practical information; all data shown above are simply for framework illustration. All financial indications are irrelevant with academic advisor company's actual information.

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