



INNOVATIVE
FINANCE

Integrating Parametric Insurance into Blue Carbon

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Mangrove boardwalk of Del Carmen, Siargao Island, Surigao del Norte Philippines (before and after Typhoon Rai)

How can we safeguard our investments in mangrove restoration and management from future adverse weather events?



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Purpose of Insurance

- Insurance provides financial coverage for losses due to natural disasters, accidents, or ecosystem damage, helping recover costs in projects like mangrove restoration or coastal protection after storms or floods.
- Insurance shifts financial risk from governments, businesses, and investors to the insurer, acting as a safety net for ecosystem investments, such as mangrove restoration, protecting them from destruction caused by events like Typhoon Odette.

Insurance must ensure quick payouts so ecosystems and communities can bounce back from disruptive weather events.

Why Parametric Insurance?

	INDEMNITY	PARAMETRIC
Payout Trigger	Based on actual damage/loss assessment	Based on predefined parameters (e.g., wind speed, rainfall).
Process	Requires a claim assessment and physical inspection of the loss	Payout is automated when conditions are met —no need for damage inspection.
Payout Timing	Can take weeks or months due to inspection and claim verification.	Immediate payouts, typically within days
Uncertainty	Payout depends on the value of assessed damage, leading to uncertainty.	Payout is based on the parameter, so no uncertainty around claims



Example 1: Parametric Insurance for Restoring Ecosystem



Payout Trigger: When weather events (e.g., storm) reaches predefined parameters (e.g., wind speed or storm surge).

Application: Funding for immediate restoration activities to repair coral reefs damaged by storms.

Location: Siargao Islands, Surigao del Norte, Philippines



Example 1: Parametric Insurance for Restoring Ecosystem (cont'd)

Important components:

- Assessment of disaster and climate risks, including potential damage and the protective value of coral reefs*.
- Socio-economic and environmental assessments, ecosystem valuation, and post-disaster risk management planning.
- Design of risk transfer mechanisms and guidance on policy, legal, and governance frameworks for coral reef* finance.
- Engagement with national and local stakeholders to highlight the economic and protective services of coral reefs.

** The parametric insurance model can be adapted to cover other ecosystems, including mangroves and blue carbon ecosystems*



Example 2: Parametric Insurance for Fisher Income Loss Protection



Funded by the
Government
of Canada

Canada



Payout Trigger: Bad weather days (e.g., heavy rain, strong winds) prevent safe fishing, triggering an automatic payout based on weather data.

Application: Ensures that small -scale fishers do not suffer financial loss due to unsafe weather conditions, allowing them to recover without overfishing or damaging marine ecosystems.

Location: Antique, Cebu, Occidental Mindoro and Surigao del Norte Provinces in the Philippines



Example 2: Parametric Insurance for Fisher Income Loss Protection (cont'd)

Important components

FEASIBILITY

- Research on the regulatory environment for parametric insurance, including the Insurance Code, regulatory sandbox, procurement policies, and roles of government agencies.
- Development of a weather index using ERA5 datasets (wind speed, wave height, rainfall) tailored to fishing practices, with specific thresholds for triggering payouts.
- A proposed product structure with pricing estimates and a cover limit of USD 100 per year
- Strategy for combining insurance and reinsurance, with support from major and specialist reinsurers experienced in parametric insurance products.



Example 2: Parametric Insurance for Fisher Income Loss Protection (cont'd)

Important components

PILOT IMPLEMENTATION

- Secure funds to cover the cost of insurance premiums.
- Establish the insurance product in the market with local and national partners.
- Develop eligibility criteria, requiring fishers to be officially registered and have no records of fishing violations, ensuring the program promotes sustainable fishing practices.
- Build the skills and knowledge of national and local government partners to support and manage the parametric insurance program.



In the Pipeline: Risk Pools for Insurance and Nature -Based Solutions

Important components

- Contributions from governments, NGOs, and private investors spread financial risk across multiple stakeholders.
- Risk pools will fund both ecosystem restoration after extreme weather and income loss protection for vulnerable communities.
- A portion of the risk pool can be allocated specifically for nature -based solutions such as ecosystem management, conservation, and protection efforts, enhancing long - term ecosystem resilience and reducing future risks.



