Final Stakeholder Workshop Notes

1. Introduction and Context

The workshop brought together a diverse set of stakeholders, including national and local government representatives, financial institutions, insurers, development partners, NGOs, and community actors. This diversity was essential, as one of the central premises of the program is that coral reef resilience cannot be addressed through a single sector or financing instrument, but instead requires coordinated action across governance, finance, science, and community systems.

A key framing that emerged early, and was reinforced throughout both days, is that coral reefs must be understood and managed as critical natural infrastructure. They underpin tourism economies, fisheries, and coastal protection, yet remain underfunded relative to their economic and social value. The workshop therefore focused not only on protecting reefs, but on transforming how they are valued, financed, and governed.

2. From Insurance to Integrated Risk Management

While the project was initially framed around risk financing and insurance solutions, discussions quickly evolved toward a broader and more nuanced understanding of resilience. Participants repeatedly emphasized that insurance alone cannot solve the underlying vulnerabilities of coral reef systems.

- Instead, the project proposes a layered risk management framework, where different types of interventions address different risk profiles:
- Avoidance and protection measures reduce exposure to damage (e.g. marine zoning, regulation of tourism and anchoring).
- Resilience-building actions strengthen reef ecosystems (e.g. fisheries management, water quality improvements, restoration).
- Preparedness systems ensure rapid response capacity (e.g. trained reef brigades, pre-positioned equipment).
- Risk transfer mechanisms, such as parametric insurance, provide liquidity for extreme events.
- Residual risk is accepted but managed through planning and diversification.

This layered approach reflects both the ecological realities of coral reefs and the financial logic of risk management. Insurance is most effective for high-impact, low-frequency events, but it depends on prior investments in resilience and governance to ensure that payouts can be effectively deployed.

3. Building the Economic Case for Coral Reef Investment

A central component of the project was the development of a robust economic case for coral reef protection and restoration, through ecosystem valuation and cost-benefit analysis.

The valuation work demonstrated that coral reefs generate substantial economic value across all pilot sites, with annual estimates ranging from approximately USD 3.9 million in Solomon Islands to USD 117 million in Fiji . These values reflect a combination of tourism revenue, fisheries productivity, and coastal protection benefits.

However, the analysis also highlighted several important nuances:

First, coral reef values are highly location-specific, even within a single site. This has important implications for prioritization, as investments must be targeted toward areas with the highest ecological and economic returns.

Second, the work identified a significant gap in the valuation of non-use and conservation values, which are often overlooked but may be substantial. This suggests that current investment decisions may systematically undervalue reefs.

Third, the analysis revealed that coral reef restoration is economically viable across all pilot sites, particularly when targeted toward high-value areas with strong recovery potential. Larger-scale restoration efforts were found to be more efficient, although practical constraints (e.g. logistics, labor, funding) limit the feasible scale of interventions.

Finally, the valuation work pointed to missed opportunities for revenue generation, particularly in tourism-dependent sites. In several cases, existing visitor fees and levies are either insufficient or poorly captured, limiting their potential to finance reef management.

4. Understanding Risk: Climate, Environmental and Socioeconomic Dimensions

The climate risk assessment provided a detailed picture of the hazards facing coral reef systems across the four countries. These include:

- Tropical cyclones and associated storm surge
- Marine heatwaves and coral bleaching
- Excess rainfall leading to runoff and pollution
- Earthquakes and tsunamis

Importantly, the analysis combined global datasets and probabilistic models with local stakeholder input, recognizing that risk is both scientifically measurable and context-specific.

One of the key insights from this work is that coral reef risk is multi-dimensional. It is not only driven by extreme events, but also by chronic pressures such as overfishing, pollution, and unregulated tourism. These pressures reduce the resilience of reefs, making them more vulnerable to acute shocks.

The vulnerability assessments further reinforced this point. By analyzing reef condition, species composition, and exposure to stressors, the project identified both areas of high vulnerability and opportunities for resilience-building.

A consistent message across sites was that management actions already exist and are well understood but are often underfunded or weakly enforced. These include:

- Controlling fishing to maintain ecological balance
- Managing tourism to reduce physical damage and pollution
- Regulating coastal development and shipping
- Maintaining water quality
- Monitoring reef health

In this sense, the challenge is not a lack of knowledge, but a lack of effective implementation and sustained financing.

5. Restoration as a Time-Critical Intervention

One of the most operationally important insights from the workshop relates to the timing of coral reef restoration.

Scientific evidence and practitioner experience indicate that rapid intervention following a disturbance significantly improves recovery outcomes. This creates a strong case for financing mechanisms that can provide immediate liquidity, rather than delayed funding.

The restoration planning component of the project therefore emphasized:

- The need for pre-disaster preparation, including training reef brigades and securing equipment
- The importance of rapid damage assessment and prioritization
- The use of low-cost, scalable restoration techniques, such as coral fragment reattachment
- The role of long-term monitoring and adaptive management

However, a critical challenge identified during discussions is that post-disaster priorities are often dominated by human needs, such as housing and livelihoods. This can delay or prevent reef restoration, even when it is economically justified.

This tension reinforces the importance of dedicated, ring-fenced financing mechanisms, such as insurance payouts or trust funds, which can ensure that resources are available specifically for reef recovery.

6. Designing Financing Solutions: Blended Finance and Trust Funds

A major focus of the workshop was the design of sustainable financing mechanisms to support coral reef resilience.

Across all sessions, there was strong consensus that blended finance approaches are essential. These combine multiple sources of funding, including:

- Public sector budgets
- Tourism levies and user fees
- Donor and philanthropic funding
- Private sector contributions
- Innovative instruments (e.g. blue bonds, carbon credits)

The rationale for blended finance is both practical and strategic. Coral reefs provide public goods, but also generate private benefits, particularly for tourism operators. A blended approach allows costs to be shared across beneficiaries.

The design of a Conservation Trust Fund (CTF) for Solomon Islands provided a concrete example of how such financing can be structured. The proposed fund aims to provide predictable, long-term financing for reef management, with an initial focus on the Arnavon Community Marine Park.

The discussions highlighted several key lessons for CTF design:

- Governance and legitimacy are critical, particularly in contexts where communities have strong ownership of resources
- Funds must be aligned with national priorities, while remaining flexible enough to adapt to local needs
- Institutional capacity is often a limiting factor, requiring investment in training and systems
- Building trust among stakeholders is essential, particularly where financial mechanisms are complex or unfamiliar

7. The Role of Parametric Insurance

Parametric insurance emerged as a promising, but carefully bounded, tool within the overall financing framework.

Unlike traditional insurance, parametric products provide payouts based on predefined triggers (e.g. wind speed, sea surface temperature), rather than assessed losses. This allows for rapid disbursement, often within days.

The project identified several potential applications:

- Cyclone/typhoon coverage in Fiji and the Philippines
- Excess rainfall coverage across multiple sites
- Sea surface temperature (SST) coverage in Indonesia

However, discussions also highlighted several important limitations:

- Insurance requires clear governance structures, including defined policyholders and payout mechanisms
- It depends on reliable data, which is not always available for all hazards
- It must be affordable and sustainable, which requires stable funding sources for premiums
- It does not address frequent, lower-impact events, which must be managed through other mechanisms

The overall conclusion was that parametric insurance is most effective when integrated into a broader financial architecture, including trust funds and public financing.

8. Country-Level Insights and Challenges

While the technical findings were broadly consistent, the workshop highlighted important country-specific differences.

In the Philippines, there is a relatively strong regulatory framework and institutional structure, including the Protected Area Management Board (PAMB), which was identified as a potential policyholder. However, coral reef considerations are not yet fully integrated into disaster risk planning.

In Indonesia, the regulatory environment is evolving, and there is significant potential to leverage tourism revenues. However, questions remain around governance structures and the allocation of premium payments.

Fiji stands out for its experience with parametric insurance through PCRIC, and for having clearer frameworks around asset ownership. However, insurance penetration remains low, and awareness needs to be strengthened.

In Solomon Islands, the dominant role of community ownership presents both opportunities and challenges. While it enables strong local engagement, it also requires governance models that are bottom-up and community-driven, rather than purely state-led.

9. Lessons from Global Experience

The case study from Quintana Roo, Mexico, provided valuable insights into how reef insurance can be implemented in practice.

One of the key lessons is the importance of integrating insurance into a comprehensive program, including:

- A dedicated trust fund
- Trained response brigades
- Clear governance and protocols

The experience also highlighted challenges, particularly in ensuring that funds can be rapidly transferred and effectively deployed.

A critical takeaway is that insurance design is relatively straightforward compared to governance and implementation, which require sustained effort and coordination.

10. Country Breakout Sessions: From Concept to Implementation

A central objective of Day 2 was to move from technical analysis to practical implementation planning. Breakout sessions were held for each of the four pilot countries—Fiji, Indonesia, Solomon Islands, and the Philippines—to identify concrete actions required to operationalize pilot initiatives and scale them nationally.

Across all groups, discussions were structured around three core questions:

1. What actions are needed to advance pilot implementation?
2. What is required to move from pilot to national scale?
3. What is needed to scale risk transfer financing mechanisms?

While each country context differed significantly, a number of common themes emerged, alongside highly specific national pathways.

11. Country Pathways and Action Plans

11.1. Solomon Islands

The Solomon Islands discussion focused heavily on institutional strengthening, awareness-building, and sequencing of financing mechanisms, recognizing that the country is at an earlier stage of readiness.

A clear priority identified was the need to strengthen the Arnavon Community Marine Park (ACMP) as a functioning model, both to deliver conservation outcomes and to build confidence for scaling financing mechanisms. This reflects a broader strategy of demonstrating success at site level before expanding nationally.

A structured action plan was developed with defined responsibilities and timelines:

- In the immediate term, stakeholders—including ACMP, CTI, and government ministries—will undertake coordinated information sharing to ensure alignment with international trust fund standards and to build mutual understanding of institutional capabilities and requirements.
- Over the following months, efforts will focus on implementing a strengthened ACMP workplan, supported by technical experts and third-party monitoring, to improve delivery and address identified weaknesses.
- A major emphasis was placed on building awareness of parametric insurance, recognizing that informed decision-making (including free, prior, and informed consent) requires targeted outreach, including cabinet-level engagement and community communication.
- In parallel, stakeholders will develop and submit a proposal for a larger grant facility, aimed at both strengthening ACMP and advancing the development of a national conservation trust fund under the Protected Areas Act.

A key insight from the Solomon Islands group was that institutional credibility and community trust are prerequisites for financial innovation. Without these, more complex mechanisms such as insurance cannot be effectively introduced.

11.2. Indonesia

Indonesia's breakout group demonstrated a comparatively advanced stage of readiness, with a strong focus on policy alignment, institutional roles, and pilot design.

The proposed pathway is structured around four interconnected outcomes:

11.2.1. Establishing Enabling Conditions

A critical first step is aligning national and provincial actors to create the institutional basis for financing mechanisms. This includes:

- Advancing the establishment of a Bali BLUD (regional public service agency) to manage marine protected area financing
- Securing agreement between the Ministry of Finance and Ministry of Marine Affairs and Fisheries on budget mechanisms for insurance premium payments, addressing a key bottleneck
- Strengthening policy advocacy using existing assessment data

These actions are intended to create a stable institutional and financial environment for innovation .

11.2.2. Developing the Coral Insurance Pilot

The group emphasized the importance of a robust and validated pilot design, including:

- Refining the business case, including whether to combine Nusa Penida with other sites (e.g. Gili Islands)
- Building multi-agency consensus across ministries, regulators, and partners
- Confirming the Indonesia Environment Fund (IEF) as the central policyholder, providing a clear governance anchor

This reflects a deliberate strategy to ensure that the pilot is technically sound and institutionally legitimate before implementation.

11.2.3. Building Local Restoration Capacity

Recognizing that financing mechanisms are only effective if operational capacity exists, the group prioritized:

- Establishing a Reef Brigade within the MPA management unit
- Providing training and equipment through partnerships with local organizations
- Strengthening community-level capability for rapid response

This directly links financial instruments to on-the-ground outcomes.

11.2.4. Building Momentum and Visibility

Indonesia also identified the importance of political and public momentum, including:

- Launching the pilot at a major international forum (Ocean Impact Summit)
- Conducting targeted outreach to stakeholders across government and the private sector

This reflects a strategic approach to scaling, where visibility supports replication and investment.

11.3. Fiji

The Fiji breakout group focused on resolving critical enabling questions, particularly around governance and financing.

The most immediate issue identified was the need to determine:

Who pays the insurance premium, and therefore who acts as policyholder?

Three potential models were discussed:

- Government-led
- Private sector (e.g. hotels linked to reef-dependent tourism)
- Community or trust-based models

This decision is foundational, as it shapes incentives, governance structures, and implementation pathways.

Sequencing and System Design

A key recommendation from the Fiji group was that insurance product design should not be the starting point. Instead, the process should begin with:

- Designing the response and restoration program
- Defining operational roles and responsibilities
- Establishing governance structures

Only once these are in place should insurance be layered in.

Market and Financial Considerations

The group identified several practical considerations:

- Indicative insurance premiums are likely to range from USD 60,000–90,000 annually, depending on coverage
- A minimum premium threshold (~USD 50,000) is typically required for market engagement
- Local insurers currently lack experience with reef insurance, requiring engagement with brokers and potentially international partners

Institutional and Stakeholder Coordination

The group emphasized the importance of:

- National dialogue on climate insurance, involving multiple ministries
- Site-level consultations with communities and private sector actors
- Leveraging existing platforms such as the Coral Reef Hub

The proposed next step is to convene an inter-ministerial dialogue (targeting June, aligned with World Reef Awareness Day) to build consensus and define roles.

Critical Gap: Disbursement Mechanisms

A major difference identified was the absence of a clear mechanism for distributing insurance payouts, including:

- Where funds are held
- Who authorizes disbursement

- How funds reach communities and restoration teams

This was recognized as a priority area for further design.

11.4. Philippines

The Philippines breakout session focused on identifying practical next steps for advancing coral reef insurance in Siargao, building on the findings of the recently completed feasibility and enabling conditions assessments. The discussion brought together representatives from key national and local government agencies, the insurance sector, and development partners to reflect on the implications of the feasibility work and to define a pathway toward pilot implementation.

The session confirmed that Siargao presents a strong case for coral reef insurance, given its ecological significance, economic dependence on reef ecosystems, and exposure to climate-related hazards. However, participants emphasized that transitioning from feasibility to implementation requires addressing several operational and institutional gaps.

11.4.1. Key Discussion Points

From feasibility to Implementation

Participants agreed that the feasibility phase has established the technical, ecological, and economic rationale for coral reef insurance. The priority now is to operationalize the concept through a pilot, focusing on system readiness rather than further analysis.

A key observation was that while the concept of insurance is well understood, the supporting systems required for implementation, particularly in relation to restoration planning, response capacity, and governance, are not yet fully developed. As such, the next phase should prioritize building these systems in parallel with insurance development.

Integration with existing DRRM Systems

The discussion highlighted the importance of integrating reef response into existing Disaster Risk Reduction and Management (DRRM) systems at the local government level. Participants noted that LGUs already have established DRRM plans and structures, which should be strengthened to incorporate reef-specific risks and response actions.

At the same time, there is a need for coordination at a higher level to ensure consistency across municipalities and alignment with financing and insurance mechanisms. The role of the Protected Area Management Board (PAMB) was identified as critical in providing system-level oversight and coordination.

This led to a shared understanding of a two-tiered system:

- LGUs responsible for local implementation and response;
- PAMB responsible for coordination, oversight, and alignment with financing mechanisms.

Operational Readiness and Reef Response Capacity

Participants emphasized that the success of coral reef insurance depends on the ability to respond rapidly following a triggering event. Currently, there is no formalized system for reef response at scale.

The concept of reef brigades was discussed as a mechanism to enable rapid deployment. However, it was noted that brigades must be:

- trained using context-appropriate protocols;

- equipped with necessary tools and materials; and
- tested through operational simulations to ensure readiness.

There was also recognition that training alone is insufficient. Simulation exercises, including mock trigger activation and deployment drills, are necessary to validate coordination, logistics, and response timelines.

Scope and use of insurance payouts

The session also discussed the scope of allowable uses of insurance payouts. While initial thinking has focused on reef restoration, participants noted that recovery from extreme events may require a broader set of interventions.

There was general agreement that further work is needed to define how payouts can support a combination of:

- reef restoration;
- protection and management actions; and
- community-level recovery measures.

Clarifying this scope will be important to ensure that the insurance mechanism is aligned with both ecological outcomes and local livelihood considerations.

Governance and Financing Considerations

Participants underscored the importance of clearly defined governance and financing arrangements. This includes establishing:

- a legally recognized policyholder structure;
- clear payout and disbursement mechanisms; and
- accountability and reporting systems.

In addition, it was noted that identifying potential funding sources is not sufficient; securing financing for the pilot phase, including premium payments, will be a critical step for enabling insurance placement.

Sustainability of reef response capacity

The sustainability of reef brigades was also discussed. Given that insurance-triggered events are episodic, participants highlighted the need to explore additional roles for brigades beyond post-disaster response.

Potential areas include reef monitoring, routine maintenance, and engagement with tourism-related activities. Further assessment is needed to determine whether reef brigades can be supported as a sustainable workforce model.

11.4.2. Key Takeaways and next steps

The breakout session confirmed that Siargao is well-positioned to pilot coral reef insurance. However, successful implementation will require a coordinated effort to address operational, institutional, and financing gaps.

Key priorities identified include:

- strengthening integration of reef response within LGU DRRM systems;
- establishing operational reef response capacity, including trained brigades and equipment;
- developing a clear trigger-based response framework;
- defining governance and payout mechanisms;
- clarifying the scope of allowable payout uses; and

- securing financing for the pilot phase.

Overall, the discussion highlighted that the next phase should focus on building a functional system that integrates reef restoration, disaster risk management, and financing mechanisms, providing a foundation for insurance placement and future scaling.

12. Conclusion

The workshop demonstrated strong momentum and interest in advancing coral reef finance and insurance solutions in the Asia-Pacific region. However, it also made clear that success will depend on moving beyond isolated pilots toward integrated, system-level solutions.

The central message that emerged is that:

- Coral reefs must be treated as valuable economic assets
- Financing must be diversified and sustained
- Governance must be clear, inclusive, and trusted
- Insurance must be embedded within a broader resilience framework

Ultimately, the challenge is not only technical or financial, but institutional and political. Achieving coral reef resilience will require long-term commitment, collaboration, and innovation across sectors and scales.