Abandoned, Lost and Otherwise Discarded Fishing Gear in Asia Pacific: Status, Trends and Best Management Practices

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Marine Pollution from the Fisheries Sector

Abandoned, Lost or Otherwise Discarded Fishing Gear (ALDFG) sources:

- Capture fishing gear (e.g. nets, traps and pots)
- Fish Aggregating Devices (FADs)
- Packaging and other equipment

640,000 tons introduced to oceans each year

10% of marine debris globally, although occurrence highly variable based on locality

- In remote areas and islands, responsible for **50-90%**
- Entangled on seabed, **34%** of debris in the Mediterranean Sea

Causes: Enforcement factors, spatial pressure, operational and environmental conditions

Legal and Policy Framework

Marine Pollution Governance Framework
- MARPOL (Annex V) and guidelines
- London Dumping Convention

Fisheries Governance Framework
- UNCLOS
- UN Fish Stocks Agreement
- FAO Port State Measures Agreement

Soft instruments
- FAO Code of Conduct for Responsible Fisheries
- FAO Voluntary Guidelines for the Marking of Fishing Gear

Regional Instruments
- UNEP Regional Seas, Regional Fisheries Bodies (Regional Fisheries Management Organizations), Regional Plans of Action

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The Asia Pacific Context

Major hotspot for marine debris and plastic pollution

Developing Asia Pacific

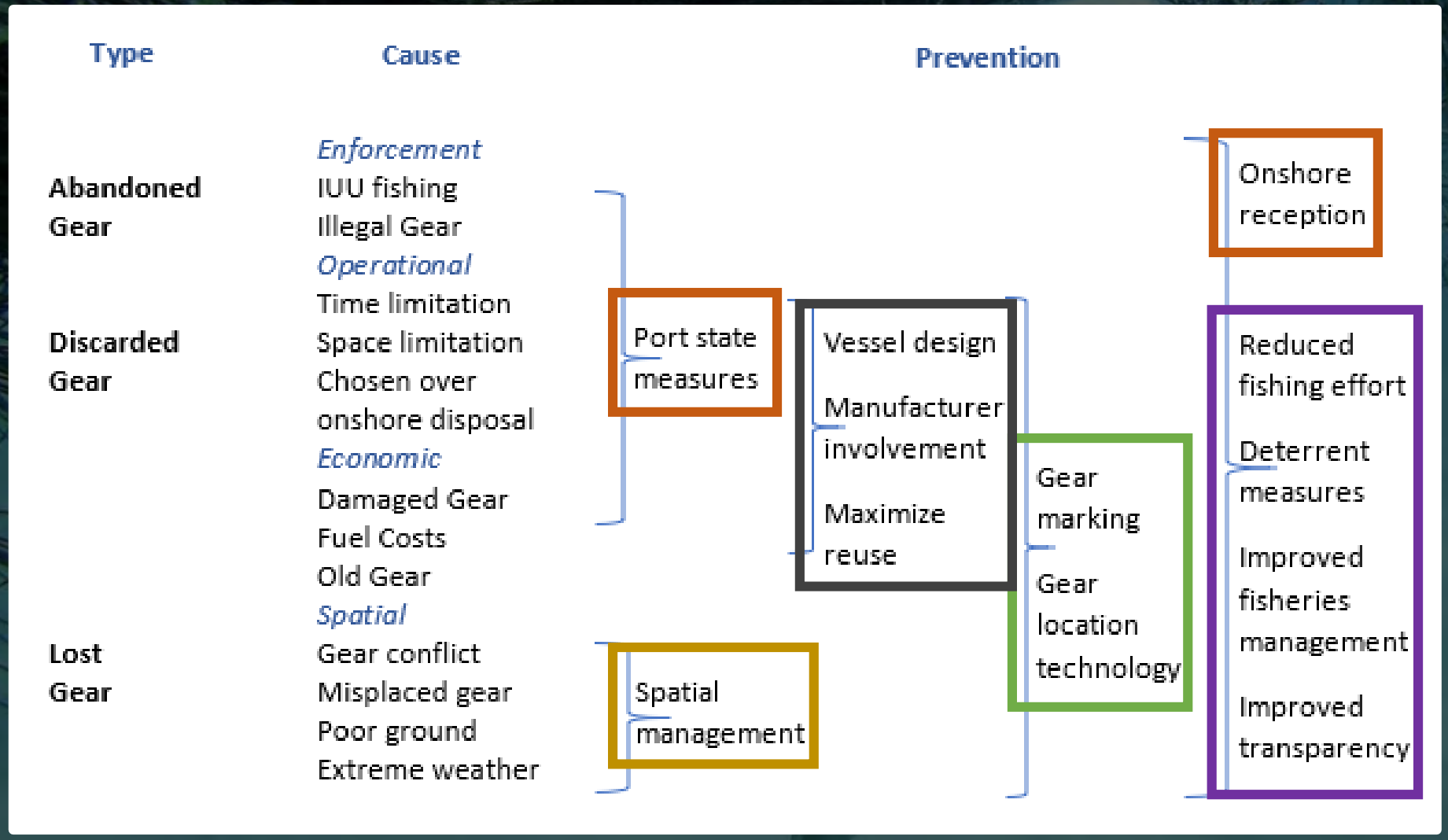
- Mostly **artisanal small scale fisheries**
- Myanmar - deliberate discarding to save on boat space and fuel
- Australia and Indonesia comparative study – Indonesians do not repair or replace nets as frequently

Links to local conditions and **development issues**

Magnitude depends on **socioeconomic status** of fishing sector

E.g. IUU, operational issues, lack of waste management infrastructure, human and technological capacity , etc.

Best Management Practices



Prevention

Mitigation

Curative

Awareness, Education and Research

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Best Management Practices

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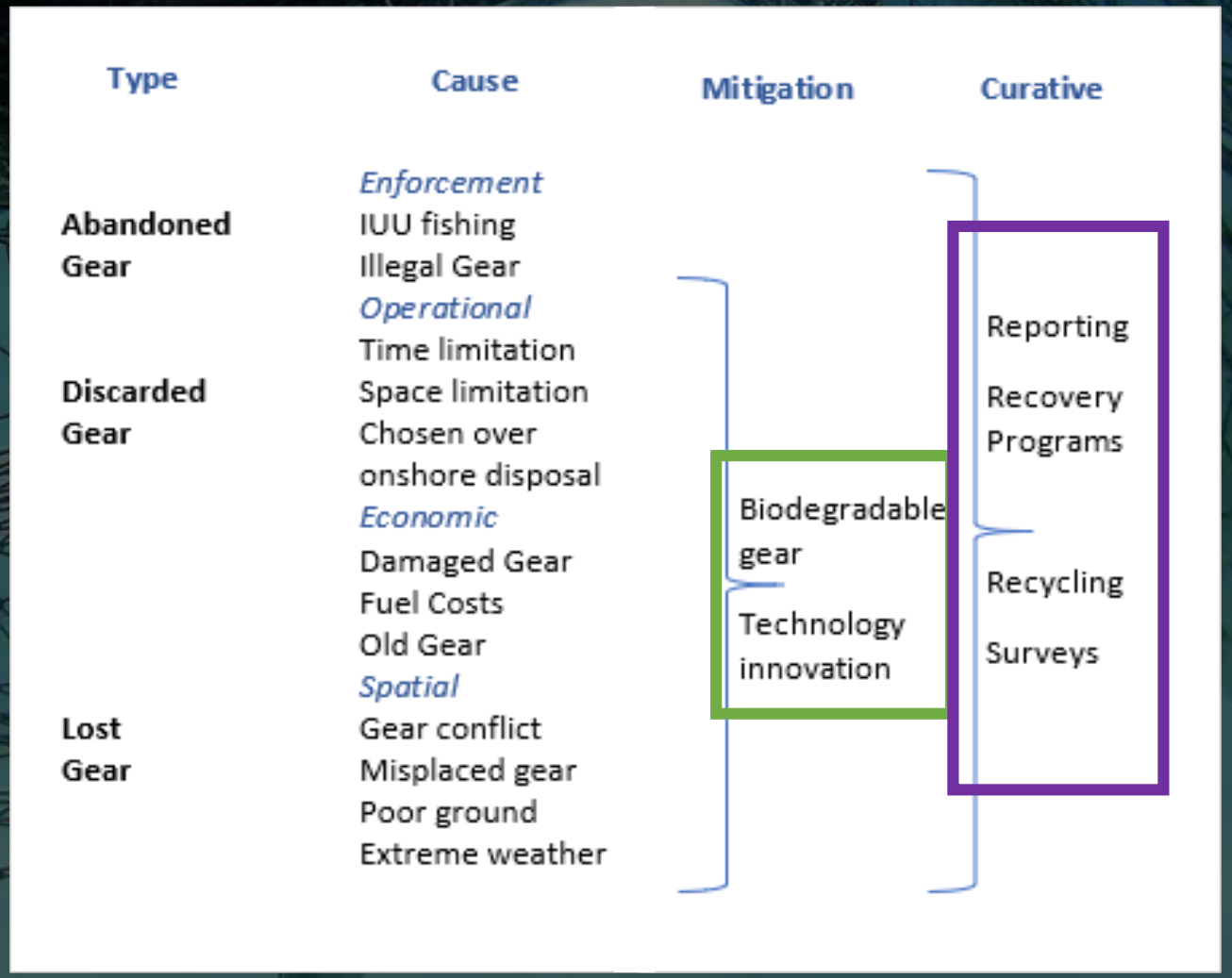

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Best Management Practices

Awareness, Education and Research

Training, knowledge sharing, stakeholder engagement, citizen science, apps for data, research on innovations

Implementation Mechanisms

Voluntary Actions – spatial measures, mitigation measures
Third party fisheries certification – ecolabelling and accreditation
Regulation or legislation – gear marking, port state measures
Information, education and communication campaigns – research and reporting

Not mutually exclusive, combination of compatible measures

Prioritize prevention measures
Tailor-fit solutions: commercial and small-scale fisheries

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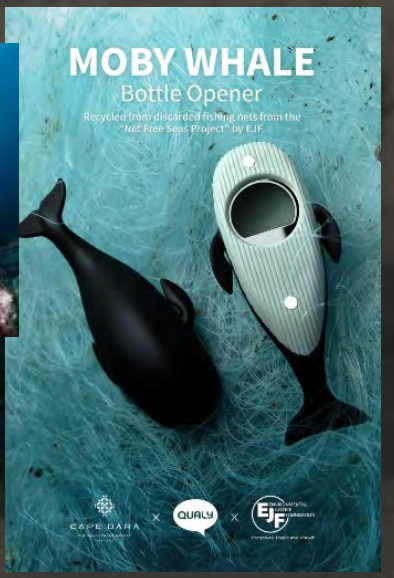
Case Studies in Asia Pacific

Prevention	Prevention	Prevention/ Mitigation	Curative	Curative
Indonesia **Gear Marking** (Food and Agriculture Organization)	**Vanuatu** **FAD Tracking and Technology Innovations** (Global Ghost Gear Initiative)	**Philippines** **Forecasting and Biodegradable Gear** (Bureau of Fisheries and Aquatic Resources)	**Myanmar** **Gear Recovery** (Myanmar Ocean Project)	**Thailand** **Recycling and Value Adding** (Environmental Justice Foundation)



Recommendations for Asia Pacific

	Implementation Mechanism				Responsible Party	Cost	Applicability		Implementation Notes
	Voluntary Guidance	Third Party Certification	Regulation/ Legislation	Awareness/ Education			Small-scale	Commercial	
Prevention Measures									
Gear marking	✓	✓	✓		Fisheries managers, fishers	Low	✓	✓	Adopt established practices
Gear marking at the point of manufacture	✓		✓		Gear manufacturers	Low	✓	✓	Adopt existing mechanisms
Requiring tracking devices	✓	✓	✓		Fisheries control agencies	High	✓	✓	Pilot and study costs entailed for SSF
Port inspection/ port state measures			✓		Port operators, fisheries control agencies	Low	✓	✓	Pilot and study mechanisms for SSF, landing sites and private ports
'Green ports' reception facilities		✓	✓		Port operators, ecolabellers	High	✓	✓	Pilot and study mechanisms for SSF, landing sites and private ports
Onshore disposal incentives			✓		Port operators	High	✓	✓	Pilot and study mechanisms for SSF
Spatial management/Zoning schemes	✓		✓		Fisheries managers, fishers	Low	✓	✓	Adopt established practices
Best practice accreditation		✓			Ecolabellers	Low	✓	✓	Adopt established practices
Manufacturer responsibility	✓		✓		Gear manufacturers	High	✓	✓	Adopt existing mechanisms
Reconfiguration of vessels	✓		✓		Fishers, fisheries managers	High	✓	✓	Pilot and study costs entailed for SSF
Retooling gear subsidy			✓		Fisheries managers	High	✓		Pilot incentive schemes for SSF
Early warning system			✓		Fisheries control agencies	High			Capacity building entailed
Broader conservation and management measures			✓		Fisheries managers	Low	✓	✓	Adopt established practices
Improve monitoring and control			✓		Fisheries control agencies	High			Capacity building entailed

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Recommendations for Asia Pacific

	Implementation Mechanism				Responsible Party	Cost	Applicability		Implementation Notes
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Mitigation Measures									
Biodegradable gear	✓		✓		Fishers, fisheries managers, NGOs, researchers	Low	✓	✓	Adopt established practices
Gear innovation	✓		✓		Researchers, NGOs	High			Pilot and study incentive schemes
Curative Measures									
Reporting system	✓	✓	✓	✓	Fisheries control agencies, fishers, ecolabellers, NGOs	Low	✓	✓	Adopt existing mechanisms
Extending ALDFG in reportorial requirements			✓		Fisheries managers, fisheries control agencies	Low			Adopt existing mechanisms
Focused recovery in hotspots	✓		✓		Fisheries control agencies, fishers, related industries	High	✓	✓	Adopt existing mechanisms
Quick response assistance			✓		Fisheries control agencies	Low			Adopt existing mechanisms
Involving marine industries	✓		✓		Related industries, NGOs	Low			Adopt existing mechanisms
Recycling initiatives	✓		✓		Local governments, related industries, NGOs	High			Facilitate linkages in supply chain
Minimizing costs of recycling	✓		✓		Related industries, NGOs	High			Investments in recycling technology entailed
Awareness, Education and Research Initiatives									
Awareness, Education and Research Activities				✓	NGOs, researchers, fisheries managers	Low			Rollout campaigns

Conclusion

Interventions seek to **change human behavior** and **promote innovations** in technology

There are a number of **binding and soft law instruments**

- Step forward is translating best practices to implementation mechanisms

Rules and guidelines to implement

- Best practices for local conditions
- Economic and industry incentives
- Recycling and waste handling

Behavioral and system changes envisaged to address marine pollution from fisheries sector

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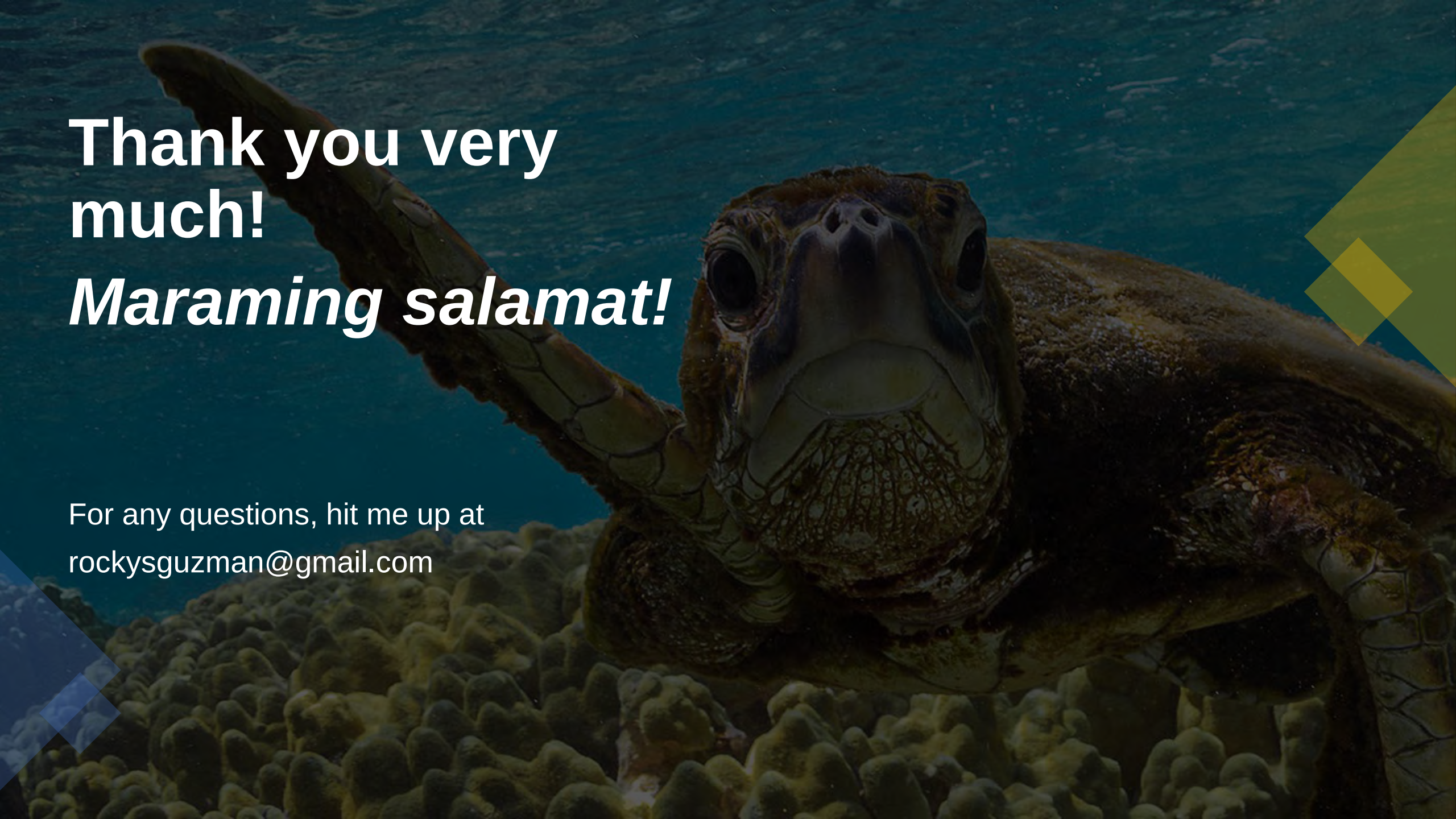

Thank you very much!

Maraming salamat!

For any questions, hit me up at
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