An underwater photograph showing a large, tangled fishing net in the foreground. A large, dark fish is caught in the net, its head and gills visible. The background is a deep blue ocean with sunlight filtering through from above, creating a bright, shimmering effect. The overall scene conveys the theme of discarded fishing gear and its impact on marine life.

# 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

# 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

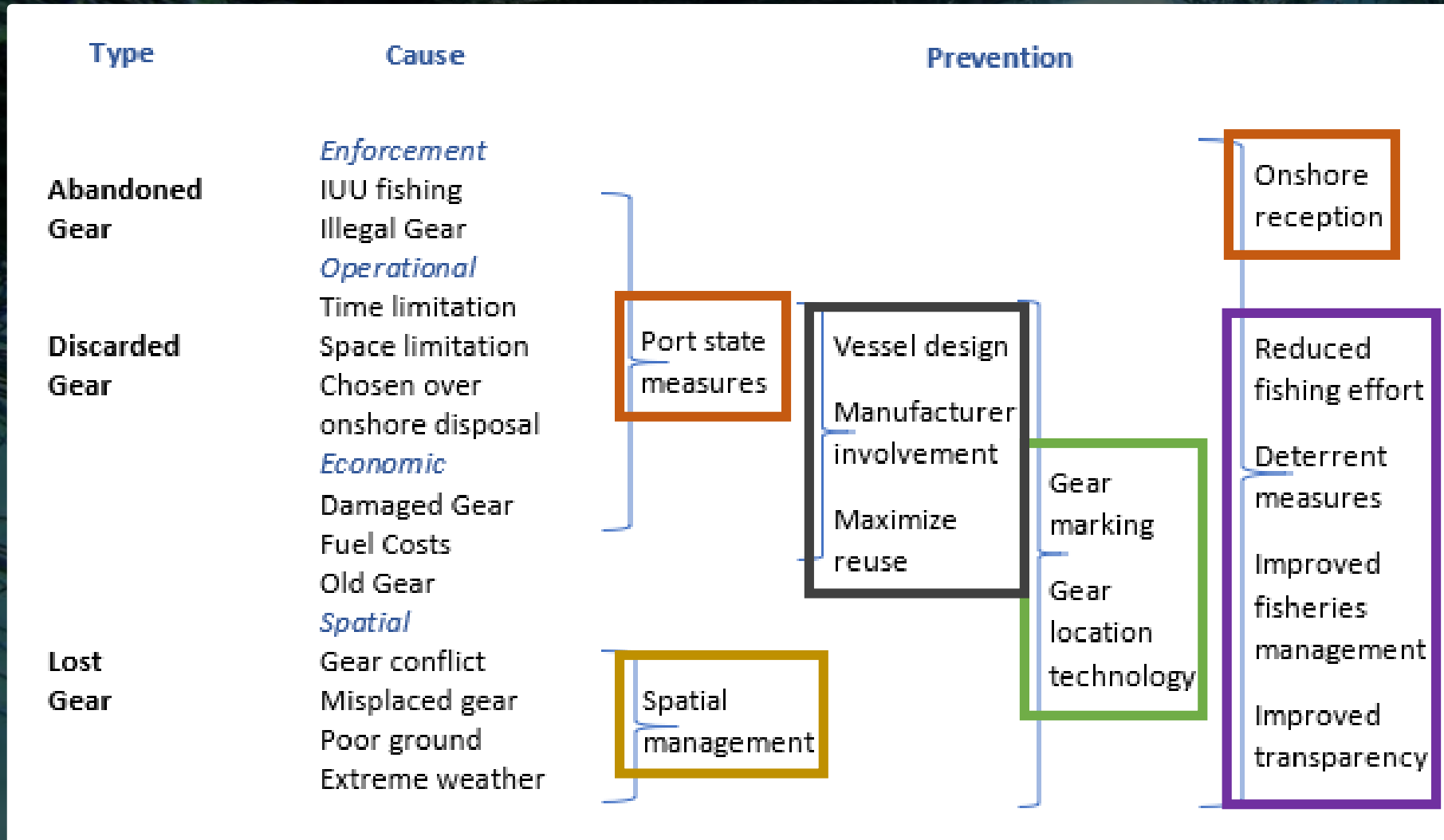
Links to local conditions and **development issues**

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

# Best Management Practices

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Type	Cause	Mitigation	Curative	
Abandoned Gear	<i>Enforcement</i> IUU fishing Illegal Gear		Reporting Recovery Programs Recycling Surveys	
	<i>Operational</i> Time limitation Space limitation Chosen over onshore disposal			
Discarded Gear	<i>Economic</i> Damaged Gear Fuel Costs Old Gear	Biodegradable gear Technology innovation		
	<i>Spatial</i> Gear conflict Misplaced gear Poor ground Extreme weather			
Lost Gear				



# 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

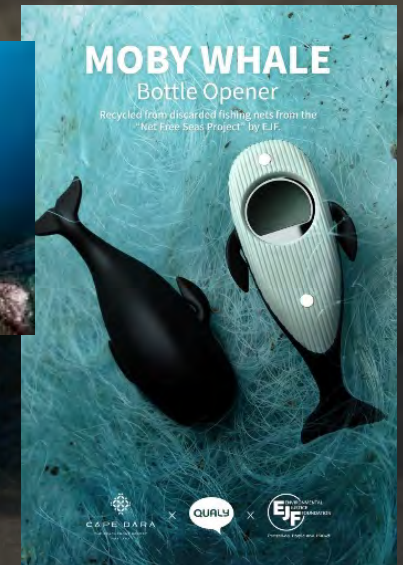
Prioritize prevention measures

Tailor-fit solutions: commercial and small-scale fisheries



# Case Studies in Asia Pacific

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

# Recommendations for Asia Pacific

	Implementation Mechanism				Responsible Party	Cost	Applicability		Implementation Notes
	Voluntary Guidance	Third Party Certification	Regulation/ Legislation	Awareness/ Education			Small-scale	Commercial	
<b>Mitigation Measures</b>									
Biodegradable gear	✓		✓		Fishers, fisheries managers, NGOs, researchers	Low	✓	✓	Adopt established practices
Gear innovation	✓		✓		Researchers, NGOs	High			Pilot and study incentive schemes
<b>Curative Measures</b>									
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
<b>Awareness, Education and Research Initiatives</b>									
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**

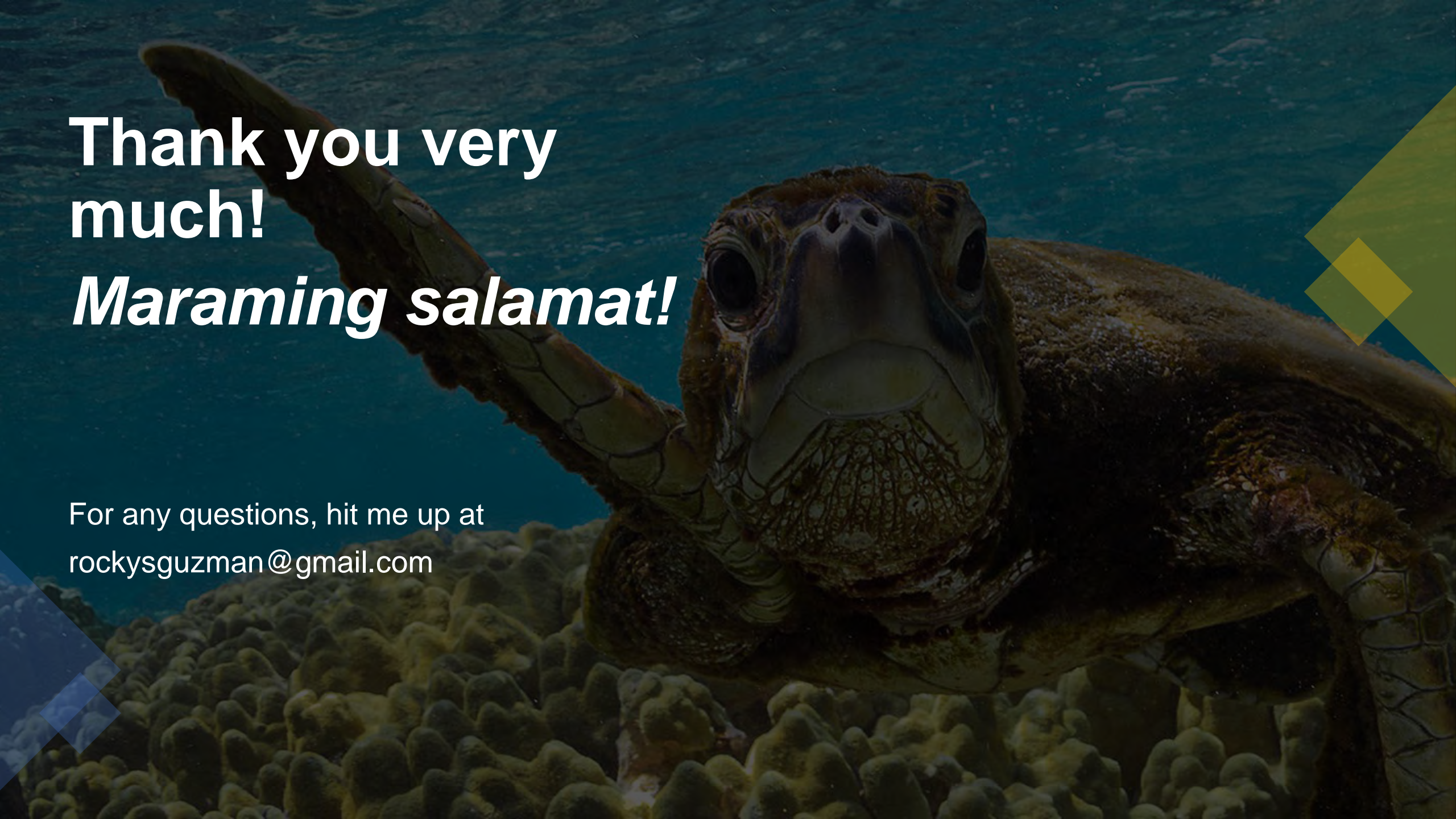
Step forward is translating best practices to implementation mechanisms

## **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



A large sea turtle is the central focus, swimming towards the camera. Its head is in the foreground, with its eyes and nostrils clearly visible. The turtle's shell is a mottled brown and green color. The background is a deep blue ocean with a coral reef visible at the bottom. The overall lighting is soft and natural, typical of an underwater scene.

**Thank you very  
much!**  
***Maraming salamat!***

For any questions, hit me up at  
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