Policy Brief Series

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Can our Oceans Breathe Again?

"A call for Oil Spill Ecosystem Restoration"

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Introduction

Oil spills pose significant ***threats*** to ***marine ecosystems***, coastal communities, and economies. Despite a decline in large spills over the past decades, recent incidents highlight the need for robust regional frameworks to address both immediate response and long-term recovery. This policy brief outlines key strategies to enhance regional cooperation, leverage advanced technologies, and establish sustainable restoration mechanisms to mitigate the impacts of oil spills in Southeast Asia and the Pacific.

Objectives

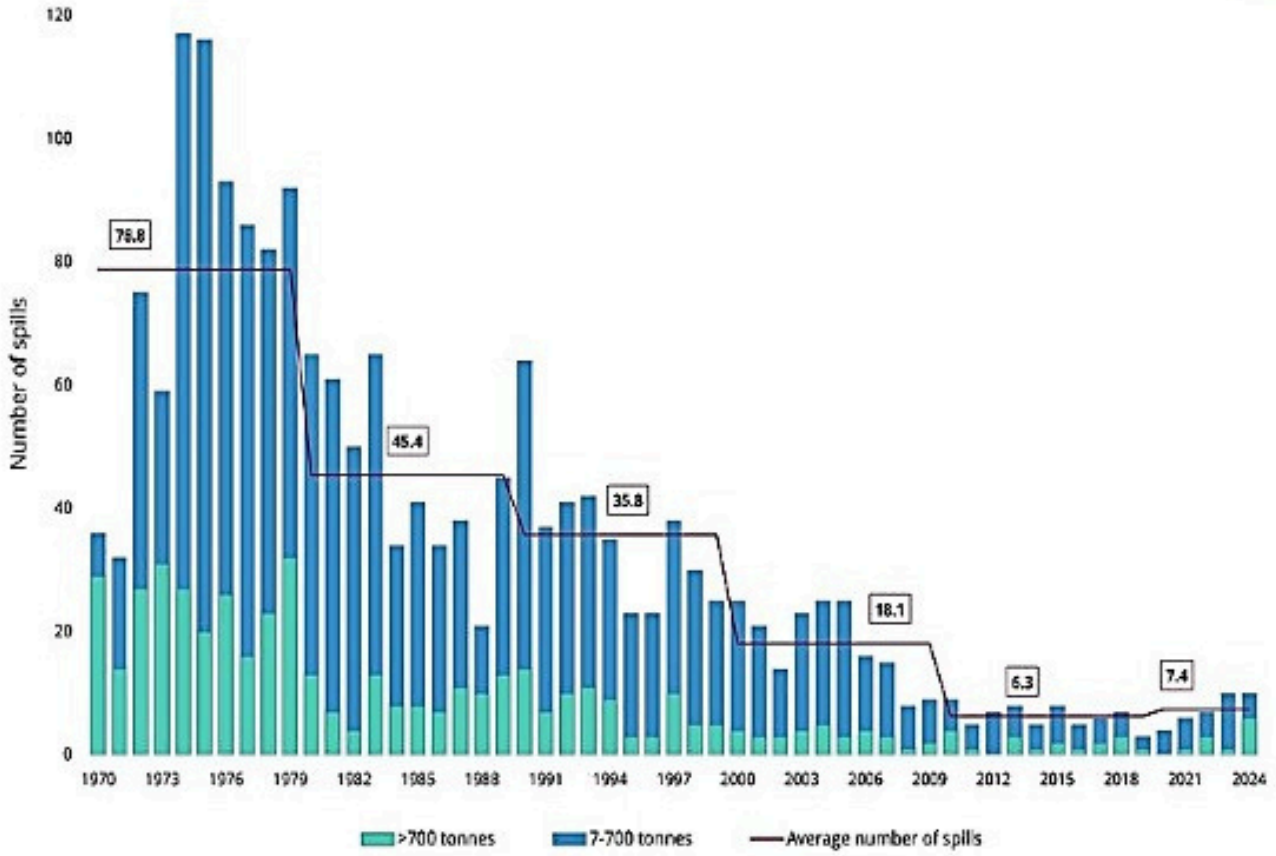
1	Strengthen Regional Cooperation and Governance on oil spill recovery
2	Promote Advanced Maritime Domain Awareness technologies for Prevention & Response
3	Develop Finance and Legal Mechanisms for equitable restoration and compensation

Background

Oil spills release harmful petroleum hydrocarbons into marine environments, causing severe ecological and economic damage. Common causes include tanker accidents, pipeline leaks, offshore drilling failures, and human errors. While existing frameworks like the ASEAN Regional Oil Spill Contingency Plan (2018) and the Pacific Islands Marine Spill Contingency Plan (2019) focus on immediate response, they lack structured mechanisms for long-term recovery and compensation.

Key Statistics (ITOPF, 2024)

Category	2024 Data
Large oil spills (>700 tons)	6
Medium oil spills (7-700 tons)	4
Total oil lost	~10,000 tons
Large spills since 1970s	Decreased by 90%, but slight increase in 2024



[Number of oil tanker spills worldwide from 1970 to 2024, by volume spilled (Source: ITOPF, 2024)]

Over the past five decades, there has been a downward trend in large-scale oil spills due to improved regulations, enforcement, and technology (ITOPF, 2024). However, recent incidents highlight the ongoing risks, particularly in regions with high shipping traffic and weaker enforcement mechanisms (IMO, 2023). The data emphasizes the need for continuous improvements in spill response and restoration strategies.

How Oil Spills Affect Us

Environmental Security	Oil spills damage coral reefs, mangroves, and seagrass meadows. Bioaccumulation of toxins threaten biodiversity and food webs.
Climate Security	Climate Change effects increase spill risks due to extreme weather and rising sea levels. Oil spills disrupt oceanic temperature and salinity balance.
Maritime Security	Large-scale spills cross national borders, requiring regional cooperation.
Food Security	Fisheries and aquaculture suffer, reducing food supply and economic stability. Tourism incurs losses—e.g. Bintan Island, Indonesia, lost ~USD 150,000 in 2019 to oil spills.
Social Aspects	**Human Rights:** Coastal communities have a right to a clean and sustainable environment. **Social Inclusion:** Women and marginalized groups are disproportionately affected by economic losses. **Poverty Alleviation**: Oil spills exacerbate economic hardships in coastal areas. **Cultural Heritage**: Pollution disrupts traditional coastal practices and sacred marine sites.

Comparing Established Policy Strategies

POLICY	STRENGTHS	GAPS
ASEAN Regional Oil Spill Contingency Plan (2018)	Focuses on response in industrialized maritime zones; encourages mutual aid agreements.	Lacks structured recovery mechanisms.
Pacific Islands Marine Spill Contingency Plan (2019)	Prioritizes ecologically sensitive areas (coral reefs, mangroves etc.).	Coordination challenges due to remote geography and financial constraints.
Civil Liability Convention (CLC)	Establishes liability for shipowners, ensuring compensation for oil spill damage.	Limited coverage for large- scale disasters; claims process can be slow.
International Oil Pollution Compensation (IOPC) Fund Convention	Provides additional financial compensation when CLC limits are exceeded.	Funding may be insufficient for catastrophic spills; eligibility restrictions apply.
MARPOL (International Convention for the Prevention of Pollution from Ships)	Comprehensive framework for preventing pollution from operational and accidental discharges.	Enforcement varies by country compliance challenges in developing regions.

What is Lacking in Oil Spill Recovery and Compensation?

100% **of Regional Policies *do not outline restoration mechanisms for the marine environment.***

The *PACPLAN* only addresses damage assessment and reporting plans once an incident has occurred. The compensation & restoration of the marine environment is not part of the contingency plan.

Recommendation

Implement an ***effective, multi-stakeholder and inclusive*** inter-agency response mechanism from the private sector to maintain and support response resources and to address the gaps of capabilities within the region.

LACK **of ocean ecosystem accounting framework and resource valuation for the Region.**

The lack of consistent monitoring requirements of the marine environment and coastal communities to determine the social, economic and environmental status of surroundings.
This would therefore enable and determine a clear recovery process would make it easier to determine pecuniary awards and damages assessment.
Claims processes seldom exist in communities that need it most.

Recommendation

There is a need to develop a policy, *specific to restoration* of marine environment affected by oil spills.

- Documenting the ocean ecosystem along shipping lanes and navigational passage with the aim of registering the information on a central storage system can help to reveal how much damages have been caused to the marine space.
- This helps to determine how much restoration work is required and to raise awareness on claims process especially for communities.
- There **must** be a process set up that allows local communities to claim or ticket on issues to allow for more fluid claims towards restoration of the environment.

LACK **of resources to implement the *PACPLAN*.**

This gap needs to be addressed to ensure that workshops and exercise drills are conducted to facilitate oil spill response for capacity building and to ensure better preparedness and response to oil spills having cross border implications.

Recommendation

Ensure that it is compulsory to trigger the response for restoration mechanism within the *PACPLAN.*

- Effective exercising and training need to be improved in the region to support maritime law enforcement mechanisms.
- Encouraging more industry and government collaborative exercises and training so expectations from both can be better managed.
- Promoting a standardized approach to the exercise evaluation process and reporting can also be beneficial.
- Capturing and sharing of relevant lessons learned from exercises within the region should be promoted.

	Short Term Action Plan 1 – 3 years	Long Term Action Plan 5 - 10 years
1	***ENHANCE*** Regional Cooperation & Coordination to strengthen ASEAN-Pacific partnerships by conducting joint training exercises, capacity building programs and raising awareness across all sectors.	***ESTABLISH*** A Sustainable Pathway for Spill Restoration & Compensation by developing a regional restoration framework that includes habitat recovery and marine biodiversity protection by including all sectors of society.
2	***ADOPT*** Developing a centralized data recording system to capture eco-system and ocean accounting, spills, responses and recovery. Advanced Technologies for Spill Monitoring, Response and Restoration as well as expand the use of satellite-based spill detection and AI-powered analytics.	***INSTITUTIONALIZE*** Oil Spill Prevention & Response Governance by enacting regional policies and framework for restoration of affected areas. Establish a permanent regional task force to oversee oil spill prevention and coordinate multi-agency efforts.
3	***STRENGTHEN*** Legal & Financial Preparedness by including within a regional oil spill response fund a compensation mechanism tailored to (and with) communities for their ease of access to claim and restore ecosystems.	***ADVANCING*** Research & Innovation for Sustainable Spill Management by investing in bioremediation technologies for spill detection and oil spill damage mitigation and forming partnerships.

Conclusion

Despite a decline in large oil spills, recent trends underscore the need for continued vigilance. Strengthening regional frameworks, leveraging advanced technology, and improving capacity-building efforts are essential to mitigating oil spill damages. A comprehensive approach—combining legal, financial, and ecological measures—will ensure a more resilient response and recovery system for Southeast Asia and the Pacific.

Call for Action

Policymakers, industry stakeholders, and regional organizations must collaborate to establish a ***holistic oil spill recovery and restoration framework*** to safeguard marine ecosystems and coastal economies.

Reference

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