

Article

Oceans as the Missing Stakeholder: How International Business Impacts Marine Ecosystems

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Keywords: ocean health, global trade, environmental governance, blue economy

<https://doi.org/10.46697/001c.157949>

AIB Insights

International business (IB) depends on the ocean as a shared infrastructure for global trade, yet IB activities increasingly contribute to marine degradation through plastic leakage, shipborne waste, unsustainable fishing, industrial and agricultural effluents, and offshore resource extraction. This essay reframes the ocean as a missing and affected stakeholder in IB. We advance two insights: first, that IB systematically overlooks its role in degrading ocean health; and second, that these IB-generated risks must be translated into managerial, policy, and societal responsibilities. Recognizing the ocean as a stakeholder is not only an environmental imperative, but a strategic and normative requirement for IB legitimacy and sustainability.

INTRODUCTION

If global trade cannot exist without the ocean, can international business afford to ignore it?

More than 80% of global trade is transported by sea, making maritime ecosystems both a natural foundation and an economic backbone of international trade (Ferrari, Christidis, & Bolsi, 2023; United Nations Trade and Development (UNCTAD), 2023). Yet, despite their strategic importance, oceans are increasingly under stress from human-induced activities. Chemical spills, plastic debris, overfishing, industrial effluents, and resource extraction have turned the ocean into one of the most endangered global commons of our time (Cordova, Fertig, & Hahn, 2025; He & Silliman, 2019; Vargas-Fonseca, Frazier, Lombard, & Halpern, 2024).

The paradox is clear: the ocean sustains international trade yet expanding trade activities simultaneously degrade marine ecosystems. The growing intensity of international trade, coupled with fragmented environmental governance, has exacerbated cumulative impacts on marine ecosystems (Govindan, Demartini, Formentini, Taticchi, & Tonelli, 2024; Hossain et al., 2024). These impacts go far beyond local environmental concerns. They directly threaten biodiversity, climate regulation, and the livelihoods of millions who depend on the ocean for food and employment (United Nations, 2022).

The argument advanced here is that international business depends on the ocean, yet its activities increasingly degrade marine ecosystems – creating both strategic and moral responsibilities. This perspective aligns with a growing, yet still marginal, stream of research recognizing the natural environment as a legitimate stakeholder affected by firm behavior. Scholars in environmental ethics and sustainability-oriented management have long argued that ecosystems should be understood as “primordial stakehold-

ers” because economic activity depends on their functioning and directly affects their integrity (Driscoll & Starik, 2004; Gutterman, 2023; Haigh & Griffiths, 2009; Starik, 1995).

Recognizing the ocean as an affected stakeholder is not merely an environmental imperative, it is a strategic and economic necessity. For firms, neglecting ocean health jeopardizes supply chain resilience, brand reputation, and compliance with emerging ESG standards. For policymakers, weak transnational regulation enables practices such as “flags of convenience” and illegal, unreported, and unregulated (IUU) fishing, which undermine sustainability commitments (Petrosian, Sosnowski, Miller, & Rouzbahani, 2020). For scholars, the invisibility of the ocean in International Business literature as a key stakeholder represents a significant blind spot that constrains and biases our ability to explain how sustainable global commerce works.

In this essay, we highlight two insights to advance this conversation. First, we argue that the ocean should be recognized as a missing and affected stakeholder in international business – an entity whose ecological health is fundamentally shaped by IB activities and whose degradation threatens long-term global economic stability. Second, we propose that five major ocean-related risks generated by international business operations and global trade activities – plastic pollution, ship waste, overfishing, industrial and agricultural effluents, and resource extraction – must be translated into concrete responsibilities for firms and policymakers. By articulating these insights, we aim to bridge IB scholarship with the urgent global challenge of ocean conservation and to offer actionable implications for managers, governments, and the IB research community.

INSIGHT 1 – HOW INTERNATIONAL BUSINESS OVERLOOKS ITS IMPACT ON THE OCEAN

IB is often conceptualized through flows of capital, goods, and information. Managers and scholars alike tend to visualize suppliers, manufacturers, distributors, retailers, and consumers as the central nodes of these complex networks. Yet one fundamental actor remains invisible in most diagrams: the ocean. Oceans are not only the medium through which more than 80% of world trade flows (United Nations Trade and Development (UNCTAD), 2023), they are also ecosystems that provide biodiversity, climate regulation, oxygen generation, and carbon sequestration (United Nations, 2022). To ignore the ocean in discussions of international business is to overlook the extent to which IB activities contribute to its degradation, while depending heavily on its stability as ecological infrastructure.

Consider maritime transport. Container shipping has long been celebrated as one of the most cost-efficient means of global logistics (Wang, He, Chen, & Liu, 2025). The rise of global trade – from electronics in East Asia to agribusiness in Latin America – has been made possible by fleets of vessels crossing oceans in standardized routes, connecting producers to markets. However, these very activities of IB also generate externalities: vessels discharge pollutants, produce waste, and burn fossil fuels, releasing emissions and contaminants into marine ecosystems (Bartosiewicz & Kucharski, 2024; Delft, 2017). For decades, these impacts were seen as minor compared to the benefits of efficiency. Today, evidence shows that IB-led operations contribute to cumulative risks to ocean health, with long-term consequences for societies and for the stability of global trade.

Neglecting the ocean as a stakeholder is not just an environmental blind spot—it carries direct strategic and economic risks. First, supply chain resilience is compromised. Extreme weather events, rising sea levels, and ocean acidification disrupt shipping routes, port operations, and coastal infrastructure (Vinogradova, Pavelsky, Farrar, Hossain, & Fu, 2025). As oceans lose their capacity to regulate climate and marine conditions, shipping reliability declines, increasing uncertainty in routes, schedules, and port operations. Second, corporate reputation is at stake. Consumers and investors are increasingly sensitive to sustainability claims, and revelations of ocean degradation linked to corporate supply chains – be it through overfishing, oil spills, or plastic leakage – damage legitimacy and brand equity. Third, the long-term viability of supply chains depends on the continued provision of marine ecosystem services, from fish stocks to stable climatic conditions. By contributing to the degradation of these services, IB undermines the very foundations of its global operations.

From an IB perspective, this neglect is symptomatic of fragmented governance. Supply chains operate across multiple jurisdictions, while the ocean is a transboundary common that often lacks effective enforcement. The persistence of “flags of convenience” illustrates this gap: vessels can register under jurisdictions with weak environmental standards, avoiding sustainability commitments while con-

tributing to illegal, unreported, and unregulated (IUU) fishing and pollution (Petrossian et al., 2020). This regulatory arbitrage not only erodes environmental goals but also distorts competition, allowing less sustainable operators to undercut responsible firms.

Recognizing the ocean as a stakeholder reframes the discussion in governance terms. According to Mitchell et al. (1997), stakeholder salience depends on three elements: power, legitimacy, and urgency of the stakeholder’s claim. However, ecosystems such as oceans cannot articulate claims, which historically results in their exclusion from IB decision-making. *Oceans are not passive spaces but active participants, and their protection requires transnational coordination.* Just as firms now integrate the perspectives of workers, communities, and NGOs into stakeholder strategies, the ocean must be acknowledged as a critical stakeholder with claims that transcend national boundaries. This implies dual responsibility: managers must internalize the ocean’s health into their IB strategies, and policymakers must design international frameworks that prevent regulatory loopholes.

For scholars, this recognition opens a new frontier in IB research. To date, the field has engaged extensively with topics such as institutional voids, global value chains, and corporate social responsibility. Yet it has largely overlooked the role of the ocean as both enabler and victim of global commerce. Treating the ocean as a stakeholder invites questions such as: How do firms account for ocean health in IB governance? What institutional mechanisms are most effective to align global trade with marine sustainability? How can IB scholarship contribute to the blue economy agenda, linking competitiveness with ocean conservation?

In summary, oceans are not externalities, but entities profoundly affected by IB activity. They enable the flows of goods that sustain globalization while absorbing the ecological costs of those flows. Recognizing this dynamic is not merely an act of environmental awareness, it is a prerequisite for resilient, legitimate, and sustainable IB.

INSIGHT 2 – FROM IB-GENERATED RISKS TO CORPORATE AND POLICY RESPONSIBILITIES

IB activities exert multiple and cumulative pressures on marine ecosystems. The systematic evidence made by Cordova et al. (2025) identifies five major categories of ocean-related risks associated with global economic activity: *chemical spills and plastics, shipborne waste, unsustainable fishing, industrial and agricultural effluents, and resource extraction* (Duncan et al., 2018; Petrossian et al., 2020; Saha et al., 2024; Wu, 2022; Ziyaeva & Anthony, 2024). These risks are not isolated environmental incidents but structural outcomes of how IB organizes production, logistics, and resource use across borders.

Plastic pollution illustrates this dynamic particularly clearly. The global diffusion of standardized packaging, low-cost materials, and linear production models has led to unprecedented volumes of plastic entering marine ecosystems, with long-term consequences for biodiversity and food chains (Duncan et al., 2018; United Nations, 2023).

Similarly, *maritime transport*, while indispensable to international trade, remains a significant source of operational waste and emissions, exacerbated by uneven enforcement of international regulations and the persistence of regulatory arbitrage through flags of convenience (Delft, 2017).

Unsustainable fishing represents another critical interface between IB and ocean degradation. Global seafood markets connect distant consumers to localized ecological depletion, while subsidies, weak monitoring, and illegal, unreported, and unregulated (IUU) fishing undermine stock recovery and long-term supply security (Petrossian et al., 2020). *Industrial and agricultural effluents* further demonstrate how IB-related production decisions upstream generate downstream impacts on marine ecosystems through nutrient runoff, chemical pollution, and the expansion of coastal dead zones (Breitburg, 2022; Saha et al., 2024). Finally, *offshore resource extraction* – including deep-sea mining and offshore drilling – poses emerging risks to poorly understood ecosystems, raising concerns about irreversibility and intergenerational harm (Ziyaeva & Anthony, 2024).

Taken together, these risks matter for IB not only because they threaten marine ecosystems, but because they undermine the very conditions that sustain global commerce. Ocean degradation increases regulatory pressure, amplifies reputational exposure, and introduces systemic uncertainty into international operations. As firms become more visible and accountable across borders, the environmental consequences of their activities increasingly translate into strategic, legal, and legitimacy risks.

Moving from risks to responsibilities therefore requires reframing ocean degradation as an IB governance issue. Rather than treating these risks as externalities or compliance costs, firms and policymakers must recognize them as outcomes of IB-driven decisions that demand coordinated responses. [Table 1](#) synthesizes how each risk category translates into corresponding responsibilities, key takeaways, and illustrative examples of emerging practices. By structuring the discussion around risks, responsibilities, and actionable responses, the table highlights the governance gap between transnational business activity and fragmented ocean regulation.

Beyond strategic and regulatory considerations, these risks also raise a fundamental moral question for international business. Drawing on stakeholder theory and environmental ethics, prior research has argued that firms hold normative responsibilities toward natural systems from which they derive economic value (Driscoll & Starik, 2004; Starik, 1995). IB benefits disproportionately from the ocean as a shared infrastructure for trade, resource access, and climate regulation, yet contributes significantly to its degradation (United Nations, 2022). This asymmetry creates a normative obligation for IB actors to reinvest part of the value extracted from ocean use into its protection and regeneration. Recognizing and acting upon this responsibility is essential not only for environmental sustainability, but also for the long-term legitimacy and viability of IB in a global governance context.

BRIDGING RISKS AND RESPONSIBILITIES IN GLOBAL GOVERNANCE

Across these five domains, a common thread emerges: fragmented governance enables environmental degradation. Oceans lack a single authority, leaving them vulnerable to overlapping but weak regimes. *International business activities – through logistics, production, sourcing, and extraction – are central drivers of these pressures*, and therefore IB actors must collectively reframe oceans not as sinks of externalities but as stakeholders with legitimate claims requiring enforceable governance mechanisms.

Moving from risks to responsibilities therefore requires reimagining governance at three levels: *managerial*, by integrating ocean-health metrics into corporate strategy, ESG reporting, and risk management; *policy*, by strengthening transnational treaties, harmonizing enforcement, and closing loopholes such as flags of convenience; *societal*, by mobilizing consumer demand and investor pressure for ocean-positive products and practices. Only by addressing IB-driven risks at these multiple governance levels can international business activities, and the supply chains through which they operate, shift from drivers of ocean degradation to catalysts of ocean stewardship.

IB can no longer treat the ocean as an invisible backdrop. *Recognizing the ocean as a stakeholder means acknowledging that its degradation is a direct outcome of IB decisions*, and that these impacts undermine the foundations of global commerce. Managers must integrate ocean-related risks into ESG frameworks, prioritize partners with verifiable marine sustainability commitments, and adopt technological innovations such as blockchain traceability and green fuels. Policymakers must establish stronger international frameworks and trade policies aligned with SDG 14. Scholars must explore how governance mechanisms, institutional voids, and firm strategies can be redesigned to protect marine ecosystems and connect IB theory with global commons challenges.

CONCLUSION

IB depends on the ocean, yet it is IB that increasingly harms it. For decades, global trade has treated the ocean primarily as an efficient transport medium rather than as a stakeholder affected by corporate decisions. As a result, plastic leakage, shipborne waste, unsustainable fishing, industrial and agricultural effluents, and resource extraction have become systemic risks generated by IB practices themselves. These risks now threaten the resilience of logistics systems, the legitimacy of firms, and the long-term viability of global commerce.

The implications are unequivocal: without healthy oceans, IB cannot be sustainable. Moving from risks to responsibilities is therefore not merely an environmental aspiration, but a strategic and normative requirement. Recognizing the ocean as a stakeholder reframes IB governance, placing accountability for marine degradation squarely within IB governance, spanning supply chain design, sourcing,

Table 1. Translating International Business–Driven Ocean Risks into Responsibilities and Action

IB-Generated Risks	Responsibility	Takeaway	Example
Chemical Spills and Plastics	Managers must embed circular economy principles, prioritizing reuse, recyclability, and biodegradable alternatives. Policymakers should accelerate multilateral agreements, such as the Global Plastics Treaty, to harmonize standards and prevent regulatory arbitrage.	Plastic pollution is not merely waste management; it is a structural failure of supply chain design embedded in IB decisions.	Unilever has implemented large-scale circular packaging pilots, reduced virgin plastic use and adopted refillable and reusable distribution models in multiple markets (Unilever, 2025). Similarly, IKEA redesigned several packaging lines to eliminate plastic entirely in favor of biodegradable materials (IKEA, 2024). These initiatives demonstrate how circularity can be integrated directly into global supply chain design and procurement strategies.
Improper Waste Disposal by Ships	Shipping companies must adopt zero-discharge commitments supported by monitoring technologies (e.g., satellites, IoT). Policymakers should strengthen port state control and penalize “flags of convenience” that shield polluters from accountability.	Sustainable logistics requires shifting from minimum compliance to proactive stewardship of ocean commons by IB actors.	Maersk has adopted zero-discharge policies in selected trade routes, supported by satellite-based monitoring and AI-enabled tracking to ensure compliance (Maersk, 2025). This case shows that shipping companies can operate ocean stewardship as part of their logistics strategies.
Unsustainable Fishing	Firms in the seafood business must adopt certification schemes (e.g., Marine Stewardship Council), invest in blockchain-based traceability, and eliminate IUU suppliers. Policymakers must align trade policies with conservation goals, using sanctions and port restrictions against IUU operators.	Fisheries sustainability is not only ecological; it is central to the legitimacy and continuity of global seafood businesses.	Thai Union, one of the world's largest seafood companies, has implemented blockchain-based traceability for tuna supply chains, enabling real-time verification of vessel origin and reducing exposure to IUU fishing (Ratanakoses & Hardasmalani, 2022). In Europe, retailers such as Carrefour require Marine Stewardship Council (MSC) certification for their private-label seafood, pushing compliance across upstream firms.
Industrial and Agricultural Effluents	IB must adopt cleaner production, wastewater treatment, and sustainable agricultural practices such as precision farming and reduced fertilizer use (Saha et al., 2024). Policymakers should enforce integrated watershed–coastal governance frameworks that recognize the connectivity between inland supply chains and marine ecosystems.	Land and sea governance cannot remain disconnected; effluents are also IB-driven externalities.	In the Netherlands and Germany, precision agriculture programs using remote sensors, controlled nutrient application, and real-time soil analysis have reduced nitrogen runoff into rivers, illustrating how IB can lower effluent footprints. Brazil's Santa Catarina dairy cluster implemented integrated watershed management plans linking farm practices to coastal water quality indicators, demonstrating effective land–sea governance (Daheim, Poppe, & Schrijver, 2016; Getahun, Kefale, & Gelaye, 2024).
Resource Extraction	Firms must commit to precautionary principles, avoiding extraction that lacks proven sustainable techniques. Governments should impose moratoria or strict environmental safeguards until effective governance mechanisms are in place. Investment in alternative energy and cleaner fuels (green ammonia, LNG) should be prioritized to reduce reliance on high-risk extraction.	The pursuit of resources for the green economy cannot reproduce the extractive logic that created ocean degradation in the first place.	Several countries (including Germany, France, and Chile) support moratoria on deep-sea mining through the International Seabed Authority until environmental safeguards are developed. Companies such as Google, BMW, and Volvo have publicly committed not to source minerals from deep-sea mining until robust governance mechanisms exist (WWF, 2021). These initiatives highlight the growing adoption of the precautionary principle in resource-intensive IB.

Source: Authors' elaboration based on Duncan et al. (2018), Petrossian et al. (2020), Wu (2022), Saha et al. (2024), Ziyaeva & Anthony (2024), and Cordova et al. (2025).

ing decisions, contracting practices, and cross-border regulation.

For managers, this means integrating ocean-impact metrics into ESG frameworks, eliminating partners that externalize marine damage, and redesigning IB for circularity and traceability. For policymakers, it demands closing regulatory loopholes, strengthening multilateral instruments, and aligning trade rules with SDG 14. For IB scholars, it opens a frontier for research that links IB, institutional governance, and the stewardship of shared natural resources.

Oceans are not passive victims of globalization; they are affected stakeholders whose health is shaped by IB. Protecting them is not separate from protecting global trade; it is the foundation on which its future depends.

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ACKNOWLEDGMENTS

The authors thank the AIB Insights reviewers and Editorial Team for their thoughtful and constructive feedback, which significantly strengthened the contribution of this paper.

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Submitted: September 02, 2025 EST. Accepted: February 17, 2026 EST. Published: February 24, 2026 EST.



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