Category	Description	Primary Operation Effect	Value Chain Stage	Time Horizon	Likelihood (Inherent)	Residual Risk (Post-Mitigation)	Location / Spatial Detail	Metrics & Targets (KPI)	Materiality Lens	Description of Countermeasure and Actions
Risks to Marine Habitats	Ship activity in Particularly Sensitive Sea Areas (PSSAs) may disrupt marine species habitat. Ship strikes are a major threat to many endangered whale species. Environmental hazards from underwater noise, which masks communication signals of marine species and disrupts behavior of marine life. Risk of container loss overboard, resulting in marine pollution and long-term ecological harm.	Increase operation cost; Increase compliance cost	Direct Operation; Downstream	Medium-term	Low	Low-Medium (mitigated by routing controls and speed protocols, but residual exposure remains in high-traffic whale corridors)	Blue Whales Blue Skies Zones; Vancouver Killer Whales Zone; NOAA Right Whale Ship Strike Reduction Rule Zones; SAvE WHALES Zones; PSSAs per MEPC.1/Circ.778/Rev.3 Annex 2	Number of transits/trespass events; container loss overboard incidents (count/year)	Impact materiality (harm to marine species/habitat) and Financial materiality (compliance and operating cost exposure)	Continuously monitor vessels' trading routes and any trespassing into PSSAs as defined in MEPC.1/Circ.778/Rev.3 Annex 2; in these zones operations are limited strictly to transshipment activities only, no cargo loading/unloading or bunkering. Monitor via Waves system to ensure compliance and encourage voluntary speed reductions for whale protection in designated Whales Initiatives zones. Implement robust vessel safety measures to minimise container loss during transit. Apply advanced routing software to improve route efficiency while preventing transit through vulnerable marine areas.
Dependence on Biodiversity	Marine ecological degradation and sea-level rise may restrict access to key shipping channels and ports, leading to longer detours, higher fuel costs, schedule disruptions and reduced operational reliability.	Increase operation cost; Increase compliance cost	Upstream; Direct Operation	Long-term	Low	Low (partially mitigated through schedule flexibility and fleet modernization, though exposure is tied to broader ecosystem trends outside company control)	Key shipping channels and ports dependent on marine ecosystem health (specific channel/port list not yet disclosed)	Number of schedule disruptions attributable to port access restrictions; Number of ESDs and green technologies/retrofits applied	Financial materiality (operational reliability, cost) with an underlying dependency on nature (impact materiality driver)	Ensure compliance with all port regulations and adjust deployment schedules to minimise additional operational costs. Engage proactively in marine ecological protection initiatives to strengthen ecosystem resilience. Prioritize fleet modernization by adopting commercially viable green technologies to reduce environmental impact and enhance operational sustainability.
Ballast Water Management	Risk of invasive species through uncontrolled ballast water discharge and the transfer of non-native aquatic organisms to new marine environments, disrupting local ecosystems, harming biodiversity and affecting fisheries and coastal industries.	Regulatory compliance; Reputational damage; Increase operation cost	Direct Operation	Medium-term	Medium	Low (mitigated by certified treatment systems and crew training)	Fleet-wide (all vessels); ports/regions where discharge occurs	% of fleet with IMO/USCG-certified ballast water treatment systems installed; number of non-compliance incidents	Impact materiality (invasive species/biodiversity harm) and Financial materiality (compliance cost, reputational risk)	Ensure full compliance with the IMO Ballast Water Management Convention to prevent the spread of invasive aquatic species. Install IMO- and USCG-certified ballast water treatment systems on all vessels. Follow manufacturer-recommended maintenance procedures/intervals. Train crew members in proper operation of ballast water management systems to guarantee effective and consistent performance.
Ship Recycling	Improper ship recycling can result in severe environmental damage and legal liabilities. Ensuring compliance with international regulations, such as the Hong Kong International Convention, and adhering to environmental protection standards is essential to mitigate this risk.	Increase compliance cost; Market restrictions; Legal liabilities	Direct Operation; Downstream	Medium-term	Low	Low (mitigated by IHM documentation and facility vetting)	Ship recycling facilities used	% of number of completed/certified IHMs	Impact materiality (hazardous material handling, environmental damage) and Financial materiality (legal liability, market restrictions)	Ensure accurate recording and documentation of hazardous materials through comprehensive Inventories of Hazardous Materials (IHM) for all vessels. Collaborate closely with suppliers to guarantee safe and environmentally responsible recycling practices. Select ship recycling facilities that adhere to high safety and environmental standards. Maintain a dedicated team of trained Quality Control Engineers/Experts responsible for on-site sampling, preparing IHMs and certifying compliance.
Biofouling Management	Extended anchorage during extreme weather may disrupt port operations and increase hull biofouling, reducing efficiency, raising fuel use and harming marine ecosystems.	Environmental pollution; Increased maintenance costs; Increased emissions; Reduced efficiency	Direct Operation	Short-term	Low	Low (mitigated by low-friction hull coatings and biofouling management practices)	Fleet-wide (all vessels); anchorage locations during extreme weather events	Fuel consumption variance linked to biofouling; % of fleet with low-friction hull coatings applied	Impact materiality (marine ecosystem harm from biofouling species transfer) and Financial materiality (fuel cost, maintenance cost)	Implement proper biofouling management that minimizes environmental harm, while ensuring compliance with IMO and applicable environmental regulations. Apply low friction paints on all vessels, leading to significant power savings and subsequent reductions in carbon emissions, while reducing negative environmental impacts.
Waste Management	Improper handling of waste and plastics may lead to pollution into the marine environment, posing ecological harm and regulatory non-compliance. Implementing IMO-aligned systems and crew training helps prevent plastic discharge and maintain environmental standards.	Environmental pollution; Violations, fines; Navigational safety risks; Reputational risks	Direct Operation	Medium-term	Medium	Low (mitigated by onboard segregation, compaction, and crew training)	Fleet-wide (all vessels)	Volume of waste discharged ashore vs. onboard-managed; number of garbage-compactors installed	Impact materiality (marine pollution) and Financial materiality (fines, reputational risk)	Install garbage compactors on all vessels to reduce waste volume onboard. Onboard garbage is segregated under DSMS procedures, with separate waste streams and practices to prevent, reduce, recycle and safely discharge waste ashore, in compliance with international regulations. Train crew on proper garbage segregation and handling of waste to reduce impacts on the marine environment.
Biodiversity Protection Opportunity	Leverage advanced route optimization and environmental data analytics to minimize whale strikes, reduce underwater noise and lower fuel consumption simultaneously.	Reduced impact on marine species; Reduced emissions	Direct Operation	Long-term	Low	N/A (opportunity, not a risk)	Routes covered by route-optimization and environmental data analytics systems	Reduction in whale strike incidents; fuel consumption savings from optimized routing	Impact materiality (positive - reduced species harm) and Financial materiality (cost savings, compliance support)	Enhanced biodiversity protection and operational efficiency while lowering costs and supporting compliance with marine protection regulations.