

Acute	Chronic	Legal and policy	Market	Technology	Reputational
Physical risk			Transition risk		

CMA CGM Penalized for Nature Threats Posed by Untreated Ballast Water

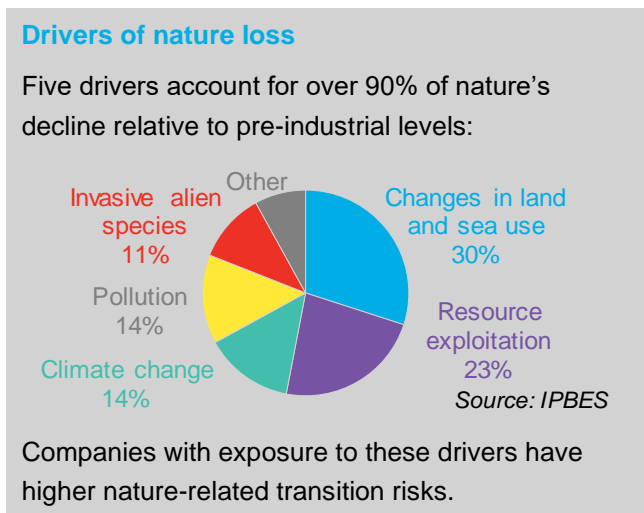
The world’s third-largest container shipping company, CMA CGM, received \$165,000 in penalties from the US Environmental Protection Agency in August 2023 over risks its operations presented to local waterways. Four ships operated by the Marseille-based company were found to have violated the Clean Water Act by discharging untreated ballast water without authority or adequate reporting, as well as other recordkeeping, inspection, monitoring, and reporting infringements.

While the penalty imposed is far smaller than other case studies, the CMA CGM case is indicative of tighter environmental regulation of the shipping industry and scrutiny of the threats it presents.

100% Share of gross value added in the direct operations of the transport sector that is moderately or highly nature-dependent

\$165,000 Penalties for violations involving ballast water discharge, inspection, monitoring and reporting

30% Share of company’s fleet now fitted with a ballast water treatment system

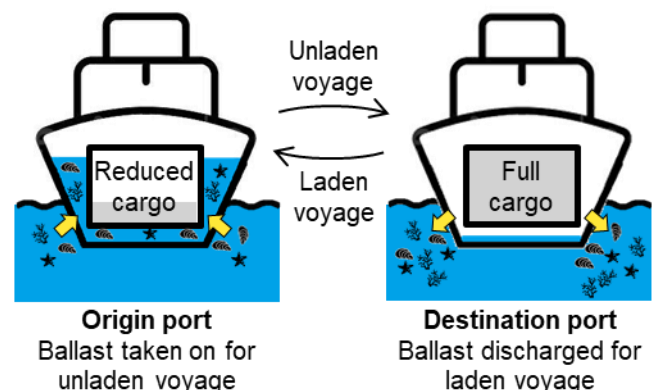


Manifestation of nature risk

CMA CGM is an industry giant, operating almost 600 vessels across 435 ports, in addition to its smaller land and air logistics services. Like all global shipping companies, CMA CGM operates in natural environments where conditions are often hostile. Its vessels expose marine ecosystems to contamination risks from ballast water discharge, oil or fluid spills, or cargo lost at sea, impacts that can result in costly legal action and remediation, reputational damage, and physical loss or damage of vessels and cargo.

Ballast – water that is pumped into the ship’s hull to steady the vessel in open seas then released at the destination port – is essential to safe navigation, but can introduce invasive species and may be contaminated with oil, paint chips, rust, sediment, and toxins that damage marine life.

Ballast water moves marine life and contaminants from one port to another



Source: BloombergNEF

The movement of contaminated ballast water from one port to another has been linked to the spread of invasive species such as Asian kelp, the European

Acute	Chronic	Legal and policy	Market	Technology	Reputational
Physical risk			Transition risk		

green crab, North Pacific seastar and the zebra mussel, a native to the Caspian and Black Seas that has proliferated across European and US waterways. These mussels accumulate on surfaces such as rocks, docks and boats, outcompeting native species, other invertebrates and young fish until they eventually overwhelm the water system.

In addition to the ecological damage, the US Geological Survey estimates invasive mussels cause \$1 billion in damage to infrastructure each year, including clogging exhaust pipes and heat exchangers of power plants and industrial facilities. There are no control mechanisms once an outbreak has occurred.

Invasive zebra mussels attached to native mussel



Source: US National Oceanic and Atmospheric Administration [climate.gov](https://www.climate.gov)

Managing nature risk

The risk of introducing invasive species through ballast water is managed through international conventions and local laws, which like the marine environments, can vary significantly. Some jurisdictions including the US have mandated that ship operators install biological control devices to treat ballast water and monitor and report shipping activities that present risk to nature.

In the case of CMA CGM, the company was found to be in numerous breaches of the Vessel General Permit (VGP), a key element of the US Clean Water Act which relies on industry self-reporting of potential spills,

untreated ballast discharge and faulty pollution prevention equipment.

In August 2023, the shipping giant was handed \$165,000 of penalties relating to multiple infringements by four vessels. These infringements included two untreated ballast water discharge events in the waters around Los Angeles and Norfolk, Virginia. The two offending vessels were each capable of holding almost 33,000 cubic meters of ballast water, enough to fill 13 Olympic swimming pools.

Both ships were required by law to have a ballast water treatment system fitted from the time of launch in 2015, according to a mandatory technology deployment schedule outlined in the VGP that applied to all large vessels constructed after December 2013. Older ships needed to be retrofitted with a treatment system at the first scheduled drydocking after January 2014 or January 2016, depending on ballast capacity. It is unclear why these vessels were not fitted with the technology. The company also failed to conduct the necessary calibration of a ballast water treatment system, adequately monitor and sample ballast discharges, and properly report the results of annual vessel inspections. CMA CGM did not respond to BNEF's request for comment.

Penalties issued to CMA CGM for Clean Water Act infringements

Vessel	Alleged violations	Penalty
<u>Fidelio</u>	Multiple inspection, calibration, sampling, and reporting violations over 2018-2020	\$52,197
<u>A. Lincoln</u>	Untreated ballast water discharge near a port in Norfolk, Virginia, in 2021, multiple reporting violations over 2018-2020	\$48,277
<u>T. Jefferson</u>	Untreated ballast water discharge near a port in Los Angeles in 2018, and multiple reporting and sampling violations in 2020	\$48,233
<u>Columbus</u>	Multiple reporting violations over 2017-18	\$16,293

Source: BloombergNEF, US EPA.

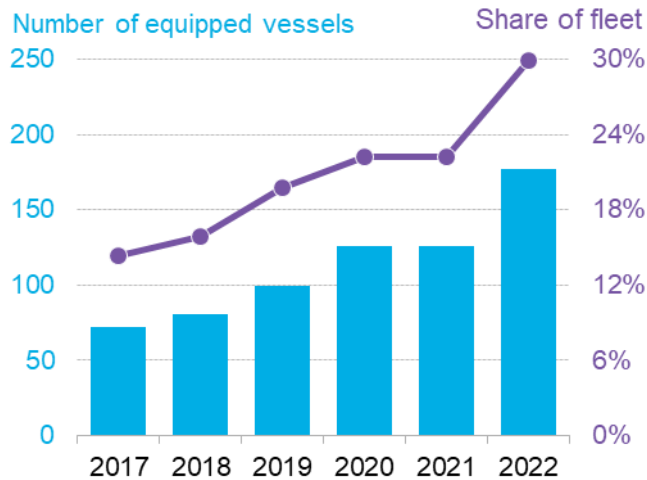
Acute	Chronic	Legal and policy	Market	Technology	Reputational
Physical risk			Transition risk		

Financial and reputational impacts on CMA CGM

The dollar value of the penalty imposed on CMA CGM is trivial relative to the industry leader’s \$74.5 billion in revenue and \$76 billion in assets in 2022. However, it comes on top of compliance costs to meet conditions of the Vessel General Permit.

CMA CGM has been steadily adding ballast water treatment systems to its ships past the US deadlines. As of 2022, almost 30% of CMA CGM’s global fleet had been fitted with the technology. The company chose to use ultraviolet radiation ballast water treatment systems, instead of chemical options which have negative impacts on local biodiversity. Treatment systems typically cost \$1 million to \$5 million per ship, according to the International Chamber of Shipping.

CMA CGM is deploying ballast water treatment across its vessel fleet



Source: CMA CGM, BloombergNEF.

The US EPA’s practice of publicizing infringements and settlements could further impact CMA CGM by diminishing its reputation as a sustainable shipping company.¹ The fines and non-compliance undermine the shipper’s climate and nature stewardship. It is a signatory of the United Nations Sustainable Ocean

¹ Containership companies are under pressure from their customers to be more sustainable; for example, nine leading multinationals, including Amazon, Unilever and Ikea, have committed to only using zero-emission ships to transport their cargo by 2040.

Principles and was recently certified Green Marine Europe, a voluntary industry initiative requiring companies to review their environmental performance annually, submit to external verification and publish the results, and commit to a process of continual improvement. It also works with IFREMER (French Research Institute for Exploitation of the Sea) to help preserve marine ecosystems, three NGOs to support coral reef regeneration projects around the world, and with the WWF to prevent illegal trade of endangered wildlife.

The company has also pledged not to facilitate the export of certain products linked to deforestation, such as timber from Gambia, and has set a target of “zero loss” of containers at sea.²

In addition, the privately held firm has set a target to reach net-zero carbon emissions by 2050. It is investing in bio-methanol-powered ships and investigating future fuel options including hydrogen and ammonia.

Nature risk across the shipping industry

The interaction of global shipping operations with marine ecosystems exposes companies to significant risks. These risks can be physical (for example, stranding a vessel on a coral reef), transition (for non-compliance with environmental protection laws), or systemic (if trade flows of deforestation-linked commodities are halted, for example).

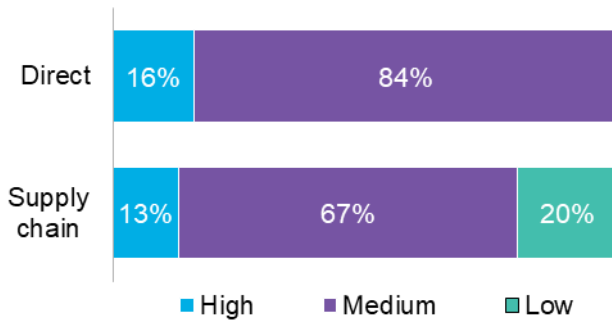
The broader supply chain and transport sector is among the most nature-dependent sectors according to the World Economic Forum, with 100% of direct economic value generation, and 80% of supply chain value generation, being moderately or highly dependent on nature. Likewise, the ENCORE nature materiality matrix identifies five areas where marine shipping has a high impact: marine ecosystem use, greenhouse gas emissions, water pollutants, soil

² The target was missed in 2022 after the APL Vanda lost 69 containers in heavy weather near the entry to the Gulf of Aden, off Yemen.

Acute	Chronic	Legal and policy	Market	Technology	Reputational
Physical risk			Transition risk		

pollutants, and disturbances such as noise pollution. These impacts and dependencies mutate into nature risks when inadequately managed.

Nature dependency of gross value added across supply chain and transport sector



Source: World Economic Forum, BloombergNEF.

The nature risks associated with shipping are increasing as enforcement agencies bolster their efforts to address climate change and nature loss.

The US EPA has ramped up enforcement of the inspection, reporting and technology deployment requirements of the VGP.³ The agency pursued only a handful of enforcement actions in the decade after the rules were first implemented in 2008, but is now routinely issuing five-figure penalties. Just five weeks before the CMA CGM settlement, the EPA issued \$137,000 in penalties to Singaporean-headquartered Swire Shipping for various Clean Water Act violations relating to three vessels, and \$200,000 in penalties relating to two ships operated by Tokyo-based MMS.

Shipping companies face other nature risks in their regular operations. Grounding of vessels, loss of cargo and pollution of marine ecosystems have each led to legal action against vessel operators and insurers, as well as physical damage to the ships.

³ The Vessel General Permit was scheduled to expire in 2018 and be replaced by the Vessel Incidental Discharge Act (VIDA), signed into law by then-President Donald Trump. Although the

Similar risks and opportunities for adjacent firms

Company	Risk type	Description
<u>Swire Shipping</u>	Legal	\$137,000 settlement relating to multiple ballast treatment, inspection, calibration, sampling, and reporting violations relating to three vessels operating in American Samoa, the Ports of San Francisco and Long Beach, California.
<u>Shenzhen Energy Transport</u>	Legal and physical	A \$39.3 million (\$29.6 million) settlement with operator and insurer of coal transport ship which grounded and caused damage to the Great Barrier Reef in April 2010.
<u>Exxon</u>	Legal, criminal, reputational and physical	Two decades of litigation resulting in \$507.5 million in punitive damages, \$2.2 billion clean-up costs, and \$1 billion to settle civil and criminal charges following the Exxon Valdez oil spill in the Prince William Sound, Alaska, on March 24, 1989.
<u>Steamship Mutual</u>	Legal, reputational and physical	Authorities to recover up to A\$22.5 million (\$14.4 million) in fines and clean-up costs from the insurer of APL England, which lost 50 containers overboard in May 2020.

Source: BloombergNEF

More from BNEF:

[Green Methanol Offers Container Ships a Net-Zero Lifeline \(web | terminal\)](#)

[Shipping's Bet on Methanol Raises Supply Concerns \(web | terminal\)](#)

[Maui Wildfires Expose Tourism's Nature Risk \(web | terminal\)](#)

successor weakens and removes some of the best practice requirements of the VGP, the specific rules are still being determined by the EPA. The VGP remains in force until the VIDA is officially adopted.

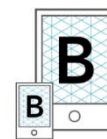
About us

Contact details

Client enquiries:

- Bloomberg Terminal: press <Help> key twice
- Email: support.bnef@bloomberg.net

Get the app



On IOS + Android
about.bnef.com/mobile

Alistair Purdie Analyst, Biodiversity Markets and Finance apurdie2@bloomberg.net

Hugh Bromley Manager, Food, Agriculture and Nature hbromley1@bloomberg.net

Copyright

© Bloomberg Finance L.P. 2024. This publication is the copyright of Bloomberg Finance L.P. in connection with BloombergNEF. No portion of this document may be photocopied, reproduced, scanned into an electronic system or transmitted, forwarded or distributed in any way without prior consent of BloombergNEF.

Disclaimer

The BloombergNEF ("BNEF"), service/information is derived from selected public sources. Bloomberg Finance L.P. and its affiliates, in providing the service/information, believe that the information it uses comes from reliable sources, but do not guarantee the accuracy or completeness of this information, which is subject to change without notice, and nothing in this document shall be construed as such a guarantee. The statements in this service/document reflect the current judgment of the authors of the relevant articles or features, and do not necessarily reflect the opinion of Bloomberg Finance L.P., Bloomberg L.P. or any of their affiliates ("Bloomberg"). Bloomberg disclaims any liability arising from use of this document, its contents and/or this service. Nothing herein shall constitute or be construed as an offering of financial instruments or as investment advice or recommendations by Bloomberg of an investment or other strategy (e.g., whether or not to "buy", "sell", or "hold" an investment). The information available through this service is not based on consideration of a subscriber's individual circumstances and should not be considered as information sufficient upon which to base an investment decision. You should determine on your own whether you agree with the content. This service should not be construed as tax or accounting advice or as a service designed to facilitate any subscriber's compliance with its tax, accounting or other legal obligations. Employees involved in this service may hold positions in the companies mentioned in the services/information.

The data included in these materials are for illustrative purposes only. The BLOOMBERG TERMINAL service and Bloomberg data products (the "Services") are owned and distributed by Bloomberg Finance L.P. ("BFLP") except (i) in Argentina, Australia and certain jurisdictions in the Pacific islands, Bermuda, China, India, Japan, Korea and New Zealand, where Bloomberg L.P. and its subsidiaries ("BLP") distribute these products, and (ii) in Singapore and the jurisdictions serviced by Bloomberg's Singapore office, where a subsidiary of BFLP distributes these products. BLP provides BFLP and its subsidiaries with global marketing and operational support and service. Certain features, functions, products and services are available only to sophisticated investors and only where permitted. BFLP, BLP and their affiliates do not guarantee the accuracy of prices or other information in the Services. Nothing in the Services shall constitute or be construed as an offering of financial instruments by BFLP, BLP or their affiliates, or as investment advice or recommendations by BFLP, BLP or their affiliates of an investment strategy or whether or not to "buy", "sell" or "hold" an investment. Information available via the Services should not be considered as information sufficient upon which to base an investment decision. The following are trademarks and service marks of BFLP, a Delaware limited partnership, or its subsidiaries: BLOOMBERG, BLOOMBERG ANYWHERE, BLOOMBERG MARKETS, BLOOMBERG NEWS, BLOOMBERG PROFESSIONAL, BLOOMBERG TERMINAL and BLOOMBERG.COM. Absence of any trademark or service mark from this list does not waive Bloomberg's intellectual property rights in that name, mark or logo. All rights reserved. © 2024 Bloomberg.