



Marine, Energy and Transport Predictions 2024

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1. Lithium ion batteries at sea: an ever growing risk for marine insurers

2024 will see a continued increase in fires on container ships, with lithium ion (li-ion) batteries a main contributor. There is an inherent risk associated with such batteries being carried at sea and the rise in demand should be at the forefront of marine insurers' minds, especially in cargo classes. Li-ion batteries can release energy after trauma, increases in temperature, overcharging, exposure to water or cell faults due to manufacturing defects. The Global Battery Alliance anticipates a year-on-year industry growth of 25% by 2030. This is expected to lead to an increased risk of untested 'counterfeit' battery production, with manufacturers/consignors either intentionally mis-declaring cargo to avoid trade restrictions or negligently applying the wrong label. If mislabelled batteries are stored next to other dangerous goods, any energy release can be catastrophic to the vessel, crew on board and other cargo. If larger consignments of li-ion batteries are exposed to water, the resulting chemical reaction can produce extremely combustible by-products which act as an accelerant. Sometimes, without suitable extinguishers, the only effective way of eliminating the fire is to allow the li-ion battery to self-extinguish, which can take several days. This highlights the very high level of risk associated with carrying li-ion batteries.

2. New marine fuels will face greenwashing risks

The technology for carrying and burning methanol as an alternative fuel is already well advanced, with Maersk taking delivery of the world's first, ocean-going methanol powered container ship in June 2023. However, the infrastructure for delivery of the quantities of 'green' methanol required by the industry is woefully inadequate. The severe restriction on supply suggests that, at least in the short term, some vessels will be forced to use 'grey' methanol. Shipowners and operators switching to methanol will therefore face increasing accusations of greenwashing, unless they can readily demonstrate the provenance and truly green credentials of the fuel on a well-to-wake basis.

3. Insurers will need to do more to support decarbonisation R&D

In order to meet the International Maritime Organisation's 2050 and interim targets, shipping will need to ramp up its investment in new fuel and propulsion technologies. This will require significant investment in research and development, with pilot schemes to demonstrate proof of concept, safety, and that any new technology can be scaled. Equipment manufacturers and shipowners who are willing to make such investments will need the support of the marine insurance market to ensure that these projects are viable, helping to lower the barriers to innovation. This collaboration will in turn provide insurers with valuable data on the risks of insuring these solutions, should they be adopted at scale.

4. Fuelling crew safety: the vital role of seafarers in decarbonisation

As the shipping industry strives to decarbonise, in 2024 we expect to see significant developments in seafarer training to facilitate this transition while safeguarding seafarers' welfare. With the shift towards LNG, hydrogen, ammonia and other low-carbon fuels, seafarer training must evolve to accommodate the safe handling and operation of these fuels. Alternative fuels pose new risks and the lack of specialised training around them is dangerous for seafarers, vessels and the environment. For example, hydrogen is more flammable than diesel and ammonia fumes are highly toxic to humans. Specialised education is necessary, for example, on fuel-specific safety measures, emergency response and equipment maintenance. Balancing the demand to adopt new, cleaner fuels with the need to protect seafarers' wellbeing will require industry-wide commitment. Underwriters will be interested in investment in training, safety protocols, and support systems, which will be vital to ensure that as the industry pursues a greener future for shipping, it also prioritises the welfare of those who make it possible.



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5. Marine cyber threats will move from external to internal

Shipowners and operators will continue to adopt solutions for greater connectivity at sea, bringing more equipment and crew online. Increased connectivity will increase the external cyber threat landscape, making internal threats easier to overlook. Older legacy technology, where patches or updates are no longer being published, could create a new internal threat of equipment failure. New International Association of Classification Societies regulations coming into force in 2024 will embed cyber security by design into new build vessels but vulnerabilities for existing vessels and equipment will remain, whether through improper integration of individual equipment into the vessel's overarching cyber-security plan or through outdated equipment that is not properly segregated.

6. Transport companies need to prepare for a surge in new regulations

EU ETS, CRSD, CII, CSDDD, ESG...the acronyms, and compliance requirements, for maritime supply chain regulation are seemingly endless. With increasing focus from regulators on supply chain transparency and emissions reporting, this trend is likely to continue, forcing companies to better understand their supply chains and their role in the supply chains of others. As key nodes in global supply chains, transport companies will need to ensure they are able to provide visibility to customers and provide accurate and complete reporting to satisfy the regulators. This will almost inevitably mean getting to grips with a lot of data and using digital tools to ease the compliance burden. For cargo insurers this should translate into better risk management, and better data availability for risk analysis, as their insureds gain a greater understanding of who their suppliers are and how their goods are transported.

7. Extreme weather events will continue to disrupt and divert supply chains

As climate change continues to alter weather patterns, intensifying extreme weather conditions and causing prolonged periods of drought, global shipping routes will continue to face significant disruption as inland waterways become impassable to all but the shallowest-drafted ships. Key pinch points such as the Panama Canal continue to operate at reduced capacity. As delays increase, we will likely find some cargoes being diverted either to multimodal alternatives or via longer routes, changing (and in some cases increasing) both the cargo and hull risk for those journeys.

8. Increased focus on wind assisted propulsion systems

The shipping industry is aiming to achieve net zero emissions by 2050 and as part of the efforts to decarbonise we expect further research into the viability of wind assisted propulsion systems (WAPS). WindWings, a type of WAPS and the result of a collaboration between BAR Technologies and Yara Marine Technologies, is already gaining traction in the industry. It is estimated that the technology could increase the fuel efficiency of a vessel by up to 30% thereby reducing CO2 emissions. To date, WindWings have been retrofitted on two bulk carriers in collaboration with Cargill and MC Shipping on the Pyxis Ocean and Berge Bulk on the Berge Olympus. However, given the early stage of this initiative, there is little data on their effectiveness in a commercial environment. We anticipate that there will be further advancements in WAPS including competing technologies in the market as well as further trial runs of WindWings on other types of vessels. Marine insurers will need to get to grips with the potential new risks these modifications will bring to the operation and structure of the vessel.

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9. Continued trouble with subsea cabling

The Global Underwater Hub has estimated that approximately 85% of the total value of insurance claims emanating from offshore wind projects is related to subsea cables, with the average settlement claim being approximately £9 million. Subsea cables are a critical part of the infrastructure of offshore wind projects as the conduits for transferring the energy generated by the wind turbines to the onshore grid. Failure of these cables not only disrupts the transmission of energy but is also very costly to remedy. With the number of offshore wind farm projects predicted to increase, we expect there will be further significant claims on insurance policies which will likely lead to higher premiums and a knock on effect on the financial viability of these types of projects. However, we also expect new technologies to emerge that seek to address the issues regarding the durability of subsea cables.



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