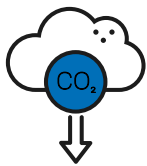


Net-zero: Shipping

2% of global energy-related CO₂ emissions come from shipping.¹
 What does the **shipping sector** need to do to reach net-zero?

LGIM will vote and implement investment sanctions against companies falling short of our climate expectations. LGIM expects companies' boards to oversee and publicly disclose answers to the following:



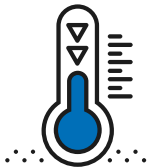
Net-zero commitment

- Does the company have a comprehensive target for net-zero by 2050 or earlier, covering scopes 1, 2 and material scope 3 emissions?²
- Has the company made a commitment to certify/certified this target with the SBTi or other external independent parties?
- Does the company have a net-zero transition plan that includes short- and medium-term targets?³



Strategy

- What are the actions and investments involved in the company's plan to reach net-zero, and what is the contribution of each action towards meeting its targets?⁴
- Is executive remuneration aligned with the company's short- and/or medium-term emission targets, as set out in the net-zero transition plan?
- Does the company have a time-bound plan in place to transform its fleet to low emission vessels?



Resilience

- Has the company analysed its business model resilience to climate-related risks and opportunities using scenario analysis (including the IEA's net-zero by 2050 scenario and a 'Business as usual' scenario) and disclosed how the output has influenced its strategy?
- Has the company analysed the physical climate risks to its assets, operations, and value chain, including potential financial impacts, and evidenced measures to mitigate or adapt to them?



Targets

- Does the company have targets related to the use and roll out of low/zero-emission fuels/technologies and the alignment of its fleets with climate objectives?



Collaboration

- How is the company working collaboratively across its value chain to reduce emissions (e.g. with ports, customers, the finance sector, strategic R&D partnerships, sector initiatives)?
- Is the company advocating meaningful policy action, including from regulators, to meet global net-zero targets (e.g. with carbon pricing)?



Red lines

- Does the company have a net-zero operational emissions target?
- Does the company disclose its climate-related lobbying activities, including trade association memberships, and explain the action it will take if the lobbying activities of these associations are not in line with the Paris Agreement?

1. IEA, international shipping report (2021).

2. Aiming to cover all segments of the business, as articulated within the GHG protocol guidance.

3. Short-term refers to 2022 - 2025, medium-term 2026-2035 and long-term 2036-2050.

4. E.g., operational and energy efficiency improvements, use of wind-assistance technologies, investments in biofuels, batteries, hydrogen, green methanol, ammonia, etc.

Further areas for company consideration

Biodiversity expectations

Why? The climate and nature crises are inextricably linked.⁵ Net-zero requires both emission avoidance and sequestration. Functioning natural systems are essential to this, but increasingly vulnerable due to climate change.

LGIM's expectations: An assessment of the impacts and dependencies on nature and biodiversity, and appropriate mitigation actions.

Sector-specific considerations: A direct impact could result from port expansion, exhaust emissions and eutrophication, spills, ocean noise, vessel strikes and physical damage from anchorage. The financing of poor offsetting practices could have an indirect effect.

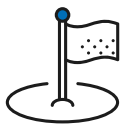


Company levers

- Sustainable biofuels
- Ammonia, hydrogen fuels
- Vessel design
- Wind-assisted propulsion for ships
- Slower ship cruising speeds
- Energy efficiency

Government policies

- Carbon pricing and taxation (including at refuelling points)
- Support for renewables
- Policy coordination between international regulators, ports and transport operators
- Regulation of biofuels
- Tightening/enforcing energy efficiency standards and low/zero-carbon fuel mandates



Challenges

The cost and readiness of new technologies
 Fragmented industry structure
 Lack of robust policies



Opportunities

Growing consumer demand to reduce 'food miles' and other transport-related product emissions
 Promoting sustainable biofuels
 Using ammonia- or hydrogen-based fuels

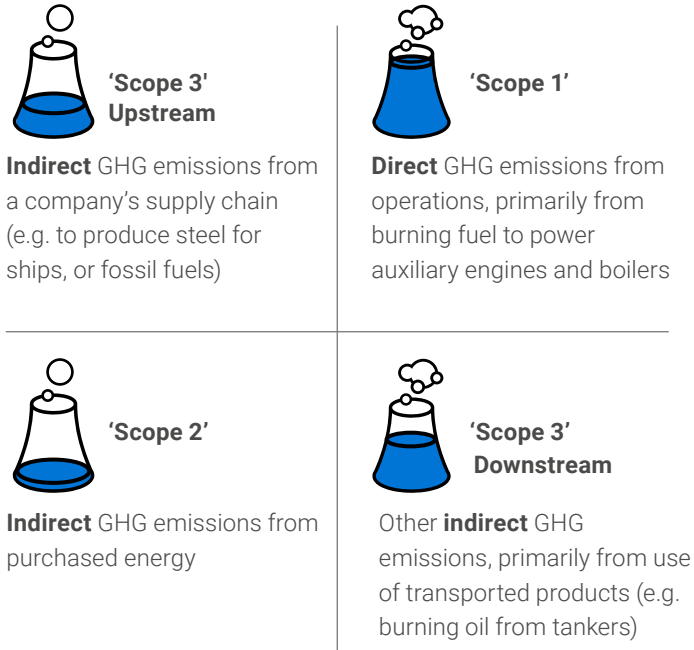


What is needed?

Company leadership	Research and innovation	Consumer behaviour
Companies investing in available decarbonisation technologies	Synthetic fuels Carbon capture and storage Battery storage	Demand for products with reduced transport emissions
Logistics companies adopting stringent targets for freight		

5. UN IPCC-IPEBS, [Biodiversity and Climate Change workshop report \(2021\)](#)

Sources of emissions



Source: UNEP (2019)

'Just Transition' considerations

Potential implications for employees, supply chain, customers, and communities from the transition to a lower-carbon business model

Physical risk impacts

Disruption to production facilities from extreme weather



For more information and to see how companies are rated

[LGIM Climate Impact Pledge score](#)

[LGIM Climate Impact Pledge](#)

Important information

Source: LGIM as at September 2023. The value of an investment and any income taken from it is not guaranteed and can go down as well as up, you may not get back the amount you originally invested. The above information does not constitute a recommendation to buy or sell any security.