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Greenhouse gas emissions (GHG) from ships were not included in the 2015 Paris Agreement on climate. In 2018, International Maritime Organisation (IMO), the United Nations' body regulating international shipping, adopted an Initial GHG Strategy for international shipping. It seeks to reduce GHG emissions from international shipping and phase them out as soon as possible in this century. The aim is to reduce average carbon intensity (CO₂ per tonne-mile) by at least 40% by 2030 and by 70 % in 2050, as well as to cut total emissions by at least 50% by 2050, compared to 2008.

The IMO 2030 reduction target can be met with available technology, by a mix of short- and mid-term measures, including operational measures, such as lower speeds, improvements in operational efficiency through data analytics, limited use of low-carbon fuels, and energy efficient designs. The Initial strategy includes a list of candidate short-, mid- and long-term measures, to be agreed in the IMO Marine Environment Protection Committee (MEPC) before 2023, between 2023 and 2030, and after 2030.

To meet the 2050 demands, however, shipping has to undergo a global transition to alternative fuels and energy sources. All alternative fuels known today have certain limitations, many solutions are not mature yet and there is no obvious 'one fuel' choice for the global fleet. The decarbonisation will require major efforts, investments and time. The industry also points out that with the current state of IMO regulation, the 2050 targets will not be met.

Given the availability and prices of alternative fuels, the fuel solution for a vast part of international shipping for the immediate future remains a choice between a variety of fuel oils or liquefied natural gas (LNG). Currently, LNG is the cleanest fossil fuel available at scale. It eliminates most SO_x and reduces NO_x emissions, helping to improve air quality in ports. Running on LNG requires important investments both into the ship and into the port bunkering infrastructure. However, LNG, which is mostly methane, cannot much contribute to shipping's decarbonisation. When risks of leakages along its life-cycle are factored in, GHG emissions from LNG-run ships can be worse than those from ships running on conventional marine fuels.

Introducing alternative fuels in shipping is linked to a number of challenges. The energy content of the fuel is in many alternative fuels lower than that of oil-based fuels, therefore the ship needs bigger fuel tanks for similar operating profiles. Many alternative fuels have a low flashpoint (below 60C), meaning that different safety aspects linked to storage and on-board use need to be addressed with specific risk mitigation measures. Bunkering infrastructure requires large investment.

The Commission President, Ursula von der Leyen, in her December 2019 mission letter to Adina Valean, Commissioner for Transport,

asked her to play a leading role in international forums, such as the IMO, and to contribute to the EU zero-pollution ambition by focusing on mitigating the impact of transport on climate and natural environment.

In the European Green Deal Communication, the Commission affirms its focus on the production and deployment of sustainable alternative transport fuels for the different transport modes. In parallel, the Commission wants to review the Alternative fuels infrastructure directive and the Energy taxation directive and propose to extend the European emissions trading to the maritime sector.

In its resolution on the European Green Deal, the European Parliament called for measures to move away from the use of heavy fuel oil and for urgent investments in research into new technologies to decarbonise the shipping sector, and in the development of zero-emission and green ships.

In its 2018 resolution on the deployment of infrastructure for alternative fuels, the Parliament called on the Commission to support the decarbonisation of the maritime and shipping sector with a clear focus on innovation, digitisation and adaptation of ports and ships. It also supported the deployment of shore-side energy supply at both inland and maritime ports.

On 29 January 2020, the European Commission's new work programme was published. Under the first priority - 'a European Green Deal', the Commission announced its intention to launch a legislative proposal on maritime fuels. According to the work programme, the proposal should be adopted in the fourth quarter of 2020 and include an impact assessment.

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