

The climate-friendly lifeblood of the global economy

While trade liberalization is a major prerequisite for global trade, it is indeed international shipping that has made globalisation possible.

“Around 90 percent of world trade is carried by ships and for the vast majority of this trade there is little or no alternative to maritime transport. This demonstrates the critical importance of the shipping industry to world trade, and international shipping is probably the single most important vehicle for globalisation,” according to Jens Søndergaard, senior vice president, J. Lauritzen A/S.

It is to a great extent because of inexpensive and efficient maritime transport that the benefits of the international division of labour is constantly enhanced, and global economic growth and prosperity are to a large extent due to ever more maritime transport. The key benefit of maritime transport is the linking of resource-rich regions (Americas, Australia and Africa) with resource-poor regions (Asia and Europe) enabling intercontinental exchange of raw materials and manufactured goods.

“Economies of scale in ship and port operations, bigger ships and not least continuous improvements in technology and efficiency have made the costs of moving goods at sea insignificant in relation to the price of a product paid by the end-consumer,” says Jens Søndergaard.

Shipping and world trade

Even though the current economic recession has led to a decline in world trade and thereby requirements for seaborne transport, shipping maintains its position as most important carrier of world trade; and as the world economy recovers, seaborne trade is likely to resume growth.

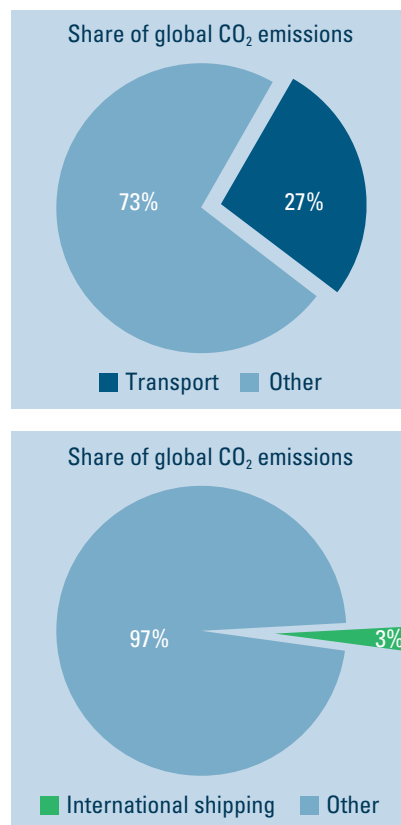
Despite difficulties in quantifying the value of world seaborne trade in monetary terms, the United Nations Conference on Trade and Development (UNCTAD) estimates that the contribution from the operation of merchant ships in terms of freight revenues is equivalent to about five percent of world trade, and J. Lauritzen estimates that the contribution amounts to 1.5-2.0 percent of global economic value added.

Shipping and the environment

Shipping is the least environmentally damaging form of transport, and the shipping industry is a relatively small contributor to the total volume of CO₂ emissions compared to other modes of transportation in terms of CO₂ emissions per tonne of cargo transported one kilometre, cf. figure 1.

At the outset, shipping is a very fuel efficient way of moving goods, but significant improvements in engine efficiency and hull design, and the use of ships with larger carrying capacity are leading to

Figure 2. Global CO₂ emissions

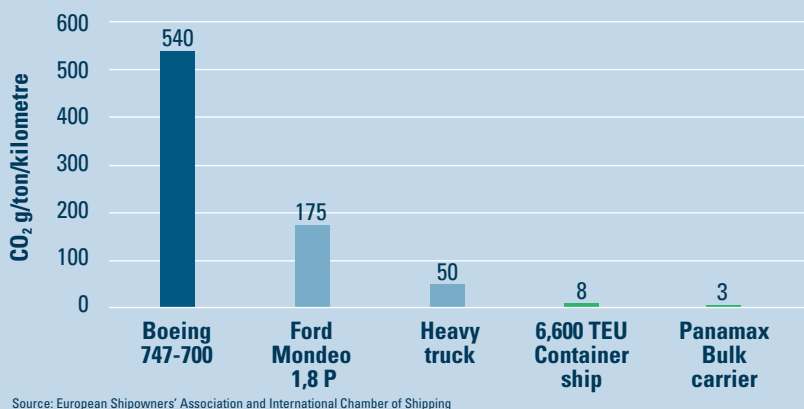


Source: IMO

considerable reductions of emissions per transported unit and thus further improving fuel efficiency. As can be seen elsewhere in this edition of Lauritzen News (page 8), new figures from Lauritzen Bulkers indicate a significant increase in fuel efficiency relating to a new generation of bulk carriers in Lauritzen Bulkers' fleet of already very young vessels.

Shipping is thus by far the most climate-efficient form of commercial transport, but taking the enormous scale of the industry into consideration, the shipping industry is nevertheless a considerable contributor to the world's total CO₂ emission in absolute terms.

Figure 1. Comparison of CO₂ emissions by different transport modes



Source: European Shipowners' Association and International Chamber of Shipping

According to the International Maritime Organisation (IMO), a specialised agency of the United Nations, marine bunker fuel consumption and CO₂ emissions from the global shipping industry's 55,000 merchant ships are estimated to amount to 2.7 percent of global CO₂ emissions; this is, however, equivalent only to 1/10th of global emissions from all transport activities worldwide, estimated to a total of 27 percent of global CO₂ emissions, cf. figure 2.

“The IMO estimates confirm that international shipping remains a very climate friendly mode of transport. This is remarkable because most news media tend to portray the shipping industry as a very climate unfriendly mode of transport. From a specifically Danish perspective, it should be noted that CO₂ emissions from the operations of the Danish shipping industry might appear considerable when compared to total CO₂ emissions of a small country with only 5.5 million inhabitants and essentially no heavy industry. These emissions should, however, be seen in the light of the massive transport work performed by Danish shipping estimated to amount about 10% of world seaborne trade,” says Jens Søndergaard.

Reducing maritime CO₂ emissions

Although the carbon footprint of international shipping remains modest in relative terms, the IMO and the shipping industry are firmly committed to playing its part in reducing emissions of carbon dioxide and green house gasses.

“Comprehensive international regulation already controls the industry, and the IMO recently implemented standards for lowering limits on certain harmful emissions of sulphur and nitrous oxides, which confirms the IMO's ratification and enforcement ability in politically complex matters,” says Jens Søndergaard.

In December 2009, the post-Kyoto climate regime will be developed further in Copenhagen under the banner of the UN Framework Convention on Climate Change (UNFCCC). It is very much hoped that an agreement will be achieved in Copenhagen stating that measures for shipping should be directed by the IMO.

“Shipping is a global industry and thus global standards applicable to all vessels irrespective of flag are paramount for the industry. What is needed from the international community is to agree upon

worldwide measures for the shipping industry that will provide real reductions in the consumption of fossil fuels, while having a minimal impact on global trade,” says Jens Søndergaard.

Shipowners, shipbuilders and the classification societies are all actively examining numerous ways to reduce CO₂ emissions for new as well as existing vessels (see the following articles in this edition of Lauritzen News), which are primarily linked to reduction of fuel consumption. Initiatives also include the IMO suggestion to introduce an energy-efficiency index for new ships and the Danish government proposal to introduce a contribution from bunker fuel with the aim of raising funds to develop new energy efficient technologies.

In the long-term perspective the shipping industry is also exploring the use of alternative fuels. For the foreseeable future, however, merchant ships will continue to burn fossil fuels and the most significant means of reducing CO₂ emissions will most likely be achieved by further fuel efficiency improvements across the entire transport chain.

