

# SUSTAINABLE SHIPPING

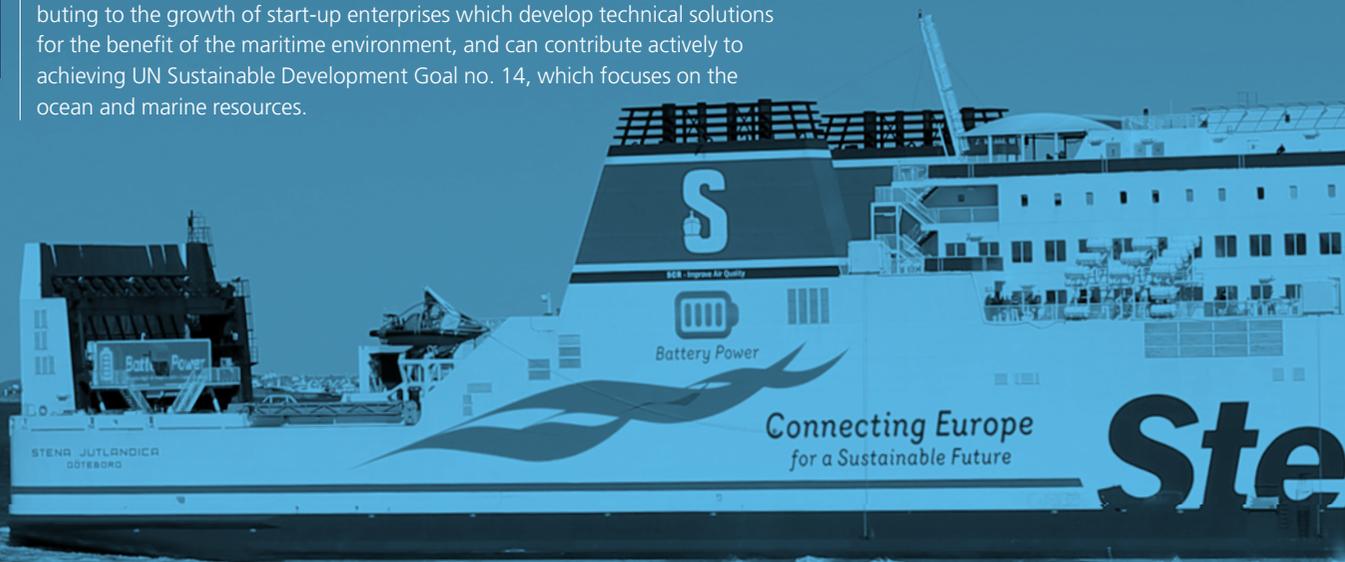
Through technical innovations, expanded responsibility in the European Community Shipowners' Associations, and efficiency improvement measures, in 2019 Stena continued to work for sustainable, effective shipping, with reduced emissions. This spread shows a selection of different examples of how the Stena Group works to contribute to UNs Agenda 2030.

## WORKING TOGETHER FOR SUSTAINABLE SHIPPING



During the year, Claes Berglund, Stena's Director of Public Affairs & Sustainability, was appointed President of the European Community Shipowners' Associations (ECSA). The European merchant fleet contributes approximately EUR 147 billion to the EU's GDP, and employs around 2.1 million people. Since Sweden is a world leader for sustainable shipping, it has a lot of influence at international level, and Claes Berglund's role as President of ECSA gives Stena a further opportunity to work for sustainable shipping.

**Stena** is also a partner in the accelerator Katapult Ocean, thereby contributing to the growth of start-up enterprises which develop technical solutions for the benefit of the maritime environment, and can contribute actively to achieving UN Sustainable Development Goal no. 14, which focuses on the ocean and marine resources.



## AI AND EFFICIENCY IMPROVEMENTS



**Stena Line** has strong focus on AI and machine learning, in order to achieve the objective to be "The world's first cognitive ferry company". Besides the opportunity to work on a more cost-efficient basis, digitalisation also gives Stena Line better opportunities for analysis and automation. This creates the right conditions for increased profitability, a better understanding of the customers' expectations, and reduced environmental impacts. As an example, in 2018 Stena Line commenced a pilot project within AI onboard *Stena Scandinavica* called Stena Line Fuel Pilot with the aim to find the most efficient way of operating a vessel on a specific route, in order to cut fuel consumption and reduce the total environmental impact. The project gave positive results and reduced fuel consumption by 2-3 per cent per nautical mile. Now, the project is to be rolled out on a further vessels during 2020, so that the total fuel consumption/emissions will continue to decline.

## REDUCED EMISSIONS



In recent years, **Stena Line** has completed more than 320 different projects to reduce fuel consumption. Since 2015, methanol has been part of the fuel mix for *Stena Germanica*, which operates between Göteborg and Kiel. Using fuel based on methanol cuts emissions of sulphur oxides and particles to zero, and emissions of nitrogen oxides are reduced considerably, compared to oil.

The project of converting the ferry *Stena Jutlandica*, which serves the Göteborg-Frederikshavn route, to a hybrid ferry, continued during the year. The idea is for the ferry to run on electricity in inshore waters. Since autumn 2018 there is a battery installation on 1 MWh on board which replaces one or two auxiliary engines when operating. This is also a safety feature that can be activated if other engines stop working.

Since 1989, **Stena Line** has used shore power connection, and the first instance was the quay in Göteborg. Today, 41 per cent of Stena Line's vessels can connect to shore power in 20 per cent of the ports at which they call, which has resulted in a CO<sub>2</sub> reduction of an estimated 12,000 tonnes annually, which corresponds to the emissions from 6,400 passenger vehicles.



## CLIMATE-NEUTRAL VISION



**Stena Teknik** plays a significant role in Stena's work to achieve the vision of climate-neutral transport. They are working intensively, for example, to optimise the design of new vessels so that, by 2050, greenhouse gas emissions from shipping can be reduced globally by 50 per cent (based on 2008 levels), according to a decision from IMO. The IMOIIIMAX (Eco MR-tanker) tanker model designed by Stena Teknik and delivered to Stena Bulk between 2015 and 2018 is probably the most effective ECO MR tanker that exists, thanks to its new hull design and fuel-efficient engine design.