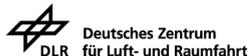




# EMISSION SEA

Determination and reduction  
of CO<sub>2</sub> emissions from ships

## Project partner



The mFund project is scheduled to run until 07.2021 and is - funded by the Federal Ministry of Transport with around 1.56 million euros.

## Sponsored by:

Federal Ministry of Transport  
and Digital Infrastructure





## /// Objective

Within the framework of EmissionSEA it is determined, how much fuel a ship consumes on its voyages from, to and in Europe at any time. Through prediction and optimization of future routes to the port of destination the nautical and operation personnel can easily understand, handle and influence the fuel consumption and CO2 emissions of their ships.

/// source: FleetMon

## /// Challenges

Global climate targets, stricter emission regulations and noticeable cost pressure are leading to ever greater incentives to reduce ship emissions and increase the energy efficiency of shipping. In particular, the EU reporting regulation on CO2 emissions from, to and within the European Union, which has been in force since 01.01.2018, has led to an increase in the energy efficiency of shipping. The specification of CO2 emissions is mandatory. However, there are currently no sufficiently suitable methods to validate reported emissions, since the ships are operating worldwide and the routes are recalculated due to adverse weather conditions, projections such as those for road traffic cannot be implemented.

## /// Concept

Based on ship motion and weather data the ship's resistance will be affected by the environment. The installed engines can be used to determine the expected fuel consumption of a voyage. Thus the hourly fuel consumption can be quantified of every ship worldwide. The knowledge gained from historical evaluations and a target/actual comparison enables a performance analysis of a ship and thus the identification of potentials for emission reduction. The evaluation of ship voyages in real time enables shipowning companies to analyse, monitor and compare the performance of their fleet.