

Evaluation, control and Mitigation of the EnviRonmental impacts of shippinG Emissions



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# **SCOPE**

EMERGE will systematically analyze the complex interactions between technological options, pollutant emissions and dispersion, and environment.

It will carry out measurements and modelling on actual vessels, along main shipping routes and in sensitive European marine regions. Measurements will focus on abatement techniques and will include emissions to, and concentrations in water, air and marine biota.

Measures to reduce air pollution from ships can have negative impacts on water quality and marine life The aim of EMERGE is to understand these trade-offs, assess their relevance for the different sea regions in Europe, and identify the best possible emission control scenarios and solutions

# **EMERGE**

is an innovative 4-year project which officially started in February 2020 and funded by the European Commission under the Horizon 2020 programme and the call 'Ship emission control scenarios, marine environmental impact and mitigation'.

## **MISSION**

- Comprehensively quantify and evaluate the effects of a range of potential emission reduction solutions for shipping in Europe
- Develop more effective strategies and measures to reduce the environmental impacts of shipping

# **OBJECTIVES**

- Collect and synthesize experimental evidence on air emissions and scrubber effluents of ships with potential emission control technologies
- Develop an integrated modelling framework to assess the combined impacts of shipping emission control options on the aquatic and atmospheric environments
- Deploy the modelling framework to assess the suitability, cost-effectiveness and impacts of a variety of shipping emission control scenarios to the marine environment
- Provide recommendations and guidance for the stakeholders and decision-makers on the most suitable, effective and cost beneficial options to significantly reduce marine pollution

## CONSORTIUM

Given its knowledge, experience and innovative techniques, methods and tools, the EMERGE consortium is able to model real world emissions of shipping to air and water, pollutant concentrations and the impacts on the environment, public health and climate for the whole of Europe.





































## **NEWS**

### PROJECT LAUNCH

The EMERGE Project officially started on the 1st of February 2020.

#### **EMERGE KICK OFF MEETING**

The whole consortium gathered for the kick-off meeting at IIASA in Laxenburg, Austria on 24th, 25th



and 26th of February 2020. After a general overview of the project by the coordinator Prof. Jaakko Kukkonen from FMI, each member of the consortium introduced its work package and explained its role within the project. In particular, the participants discussed and structured the scientific and research work that they will carry out, started designing the air and water measurement campaigns for the project's case studies, elaborated analytical work programs and clarified the interactions between different partner organizations and their tasks as well as between the models that they will use for the project. They also discussed and reviewed crucial scientific gaps with regard to the assessment of the impact of shipping emissions on the aquatic and atmospheric environments as well as on marine biota which will have to be addressed by EMERGE.

# **FUTURE EVENTS**

EMERGE team will participate in events throughout Europe.

#### Air Quality 2020 Conference | 09-13 March 2020

12th International Conference on Air Quality -Thessaloniki, Greece

#### TRA2020 | 27-30 April 2020

Transport Research Arena -Helsinki, Finland

#### Posidonia 2020 | 01-05 June 2020

International Shipping Exhibition -Athens, Greece

### Join the EMERGE Information Network!

EMERGE is open to all stakeholders globally with an interest in marine and maritime technologies, research and innovation as well as environmental protection.

By becoming part of our Information Network you are joining one of the most Innovative projects in the marine and maritime field.

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