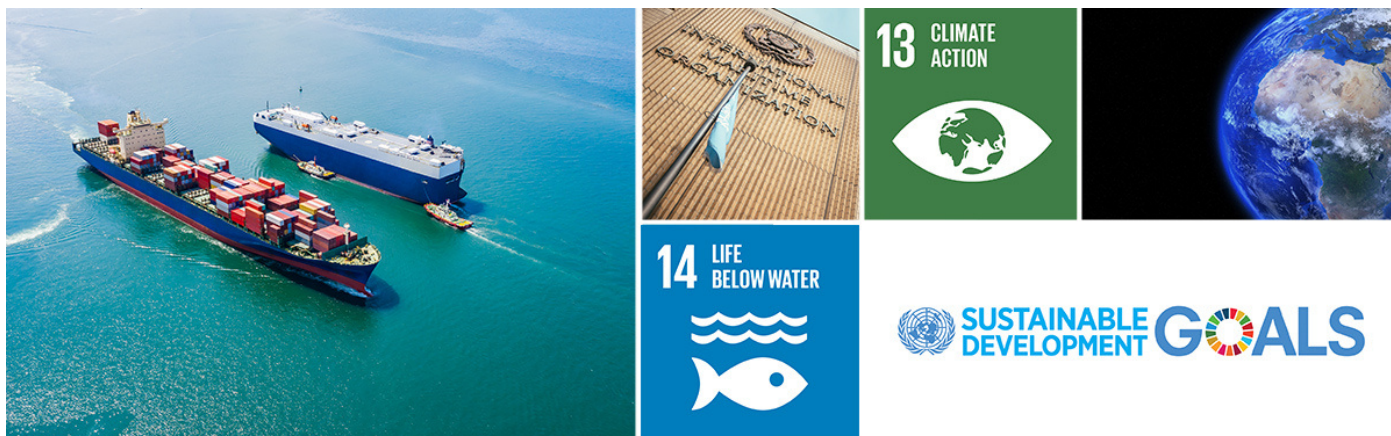




Evaluation, control and Mitigation of the EnviRonmental impacts of shippingG Emissions



Source: World Maritime theme for 2020: "Sustainable shipping for a sustainable planet" IMO

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PROJECT UPDATES

The project is running smoothly and all its activities shown remarkable development.

Regardless of the delays occurred in the measurement campaigns due to the COVID-19, so far the Case studies have progressed well. Water samples have been shipped to the case study regions, and there has been significant progress in the modelling.

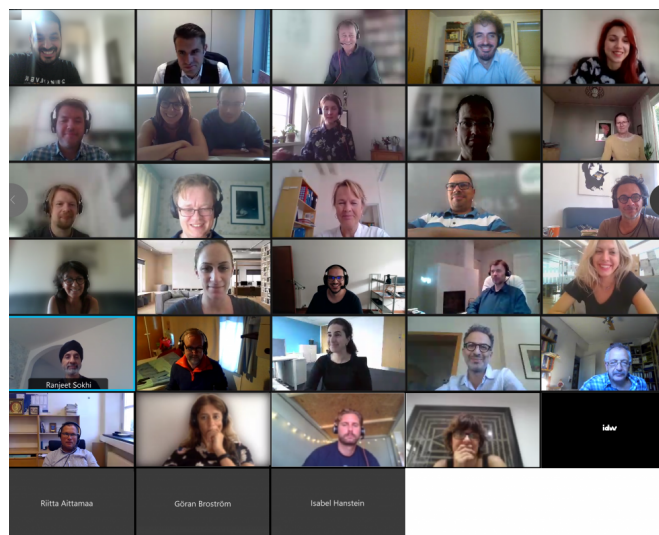
As part of the Solent Case Study, the University of Southampton team has been carrying out ecotoxicological tests on marine organisms. Progress in the modelling has been also reported for the Aveiro case study.

NEWS

EMERGE 1st MID-TERM REVIEW

The project had its first reporting period review from the DG RTD which was held online on 14th of September 2021. The project vice-leader, Prof. Fridell, IVL, and each work package leader presented the status of their work for the aforementioned period.

In the first 18 months of the project most of the work undertaken was preparatory for the main work of the project in the next two reporting periods. Overall, there has been a good overview of the academic and industrial literature on abatement options and a careful design of the data collection campaigns. The database on waste concentration produced by the project in this first reporting period is a very useful tool for practitioners and academic entities.



Group photo during the EMERGE first mid-term review

Safe distancing doesn't mean that networking and engagement activities were left behind. EMERGE had its regular annual general assembly. The project partners gathered once again online, for two consecutive days: 15th and 16th of February 2022.

Prof. Kukkonen, FMI, the coordinator of the project updated the overall achievements of the project and perspectives for the future. An overview of the case studies was delivered by Prof. Leonidas Ntziachristos before each work package leader presented the current status of their work package. On the second day, the project partners responsible for the case studies presented their results so far and their significant progress, in addition to the future plans for the next period. Moreover, the status of the modelling (marine and atmospheric environments) and impact assessment were discussed.

The closure of the annual assembly ended with summaries of the main decisions and future plans until the next reporting period.



Group photo during the EMERGE annual general assembly 2022

PUBLICATIONS

- Geels, C., Winther, M., Andersson, C., Jalkanen, J. P., Brandt, J., Frohn, L. M., Leung, W., & Christensen, J. H. (2021). **Projections of shipping emissions and the related impact on air pollution and human health in the Nordic region.** Atmos. Chem. Phys. Discuss., 21, 12495–12519.

Read [here](#)

International initiatives have successfully brought down the emissions from shipping in Emission Control Areas (ECAs), and hence the related negative impacts on environment and human health. But the question is if this is enough to mitigate the future increase in shipping activities. The overall goal of this study is to provide an up-to-date view on future ship emissions and 15 provide a holistic view on atmospheric pollutants and its contribution to air quality in the Nordic (and Arctic) area.

- Grönholm, T., Mäkelä, T., Hatakka, J., Jalkanen, J. P., Kuula, J., Laurila, T., Laakso, L., & Kukkonen, J. (2021). **Evaluation of Methane Emissions Originating from LNG Ships Based on the Measurements at a Remote Marine Station.** Environmental Science & Technology, 55, 13677-13686.

Read [here](#)

Analyzed pollution plumes originating from ships using liquefied natural gas (LNG) as a fuel. Measurements were performed at a station located on the Utö island in the Baltic Sea during 2015–2021 when vessels passed the station along an adjacent shipping lane and the wind direction allowed the measurements.

Remote marine air-quality measurements show significant climate relevant methane emissions from ships using liquefied natural gas as a fuel.

FUTURE EVENTS

[Posidonia](#) | 06-10 June 2022

The International Shipping Exhibition- Athens, Greece

The [Emerge](#) and the [Skipper](#) project will participate in Posidonia 2022 Exhibition, organizing the seminar **"Monitoring and decrease of shipping emissions"**, on 9th of June 2022.

For more information and for the agenda - follow us on our social media accounts.

[Micropol 2022](#) | 06-10 June 2022

12th Micropol & Ecohazard Conference- Santiago de Compostela- Galicia, Spain.

[Air Quality Conference](#) | 27 June - 01 July 2022

13th International Conference on Air Quality Science and Application- Thessaloniki, Greece

[ICES ASC 2022](#) | 19-22 September 2022

ICES Annual Science Conference will be a hybrid event- join online or in Aviva Stadium, Dublin, Ireland

Join the session about the impact of shipping on the marine environment ([Theme session L \(ices.dk\)](#))

[HARMO Conference](#) | 27-30 September 2022

21st International Conference on Harmonisation within Atmospheric Dispersion Modelling for Regulatory Purposes- Aveiro, Portugal

RELATED ARTICLES

MARPOL amendment prohibits carriage of non-compliant fuel oil for combustion purposes for propulsion or operation on board a ship - unless the ship has an approved exhaust gas cleaning system ("scrubber") fitted.

Consistent implementation of the IMO 2020 regulation which limits sulphur in ships fuel oil is enhanced from 1 March 2020, with the entry into force of a rule to ban the carriage of non-compliant fuel oil.

Read more [here](#).

The preparatory phase of the IMO Coordinated Actions to Reduce Emissions from Shipping (IMO CARES) project has been launched at the IMO-Singapore Future of Shipping Conference.

Read more [here](#).

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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EMERGE project under the Policy Area Ship was granted a Flagship status



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