

PROJECT SUPERALFUEL

Project Title: Sustainability of alternative fuels in the ADRION area.

Acronym: SUPERALFUEL.

Duration: 36 Month.

The project partners of the SUPERALFUEL

1. **National Centre for Scientific Research "DEMOKRITOS"** (Greece) (Lead Partner)
2. **ALMA MATER STUDIORUM – UNIVERSITY OF BOLOGNA** (Italy)
3. **Jozef Stefan Institute** (Slovenia)
4. **PIRAEUS PORT AUTHORITY S.A** (Greece)
5. **Southern Adriatic Ports Authority** (Italy)
6. **Port of Koper** (Slovenia)
7. **Albanian Institute of Transport** (Albania)
8. **Port of Bar JSC** (Montenegro)
9. **University of Belgrade – Faculty of Transport and Traffic** (Serbia)
10. **Intermodal Transport Cluster** - Hrvatska

Introduction: The SUPERALFUEL project is a groundbreaking initiative funded under the IPA Adriatic Ionian program, aimed at promoting sustainable maritime transport and enhancing intermodal connections in the Adriatic and Ionian regions.

Environmental pressure in port areas and in urban areas close to ports is high owing to emissions from ships, port machinery and transport to/from the port areas. Alternative fuels such as hydrogen, ammonia and methanol are proposed as a low-carbon clean fuel for marine transport in port areas. The overall objective of the project is to support the increase of Short Sea Shipping (SSS) in the Adriatic-Ionian Sea basin as sustainable transport mode through joint developed actions, including the promotion of the use of alternative fuels (hydrogen, ammonia, methanol) and last /first mile environmentally friendly solutions. It will demonstrate the sustainability of alternative fuels at ports, for bunkering and fuel supply and for ship propulsion.

Purpose of the Project: The primary purpose of the SUPERALFUEL project is to support the transition towards low-carbon, environmentally-friendly fuels in the maritime sector. By addressing the common territorial challenges of the Adriatic and Ionian regions, the project aims to improve connectivity, sustainability, and safety in maritime transport, thereby contributing to the overall goal of carbon-neutral smart mobility.

Specific Objectives of the Project:

1. Establish a standardized framework for the implementation of alternative fuels in ship propulsion and freight transportation.
2. Enhance safety protocols and risk assessment methodologies related to the use of hydrogen, ammonia, and methanol in maritime operations.
3. The creations of legal bases and training programs for stakeholders involved in the alternative fuel supply chain.
4. Reduce CO2 emissions and improve environmental quality in port areas and their hinterlands.

Expected Results from the Project:

1. Increased adoption of hydrogen, ammonia, and methanol as viable alternatives to traditional marine fuels.
2. Improved safety measures and risk management strategies for the handling and use of alternative fuels in ports.
3. Development of training materials and programs that equip stakeholders with the necessary knowledge and skills for implementing alternative fuel technologies.
4. Significant reductions in greenhouse gas emissions and improved environmental quality in maritime and port areas.

The Institute of Transport will play a crucial role in the SUPERALFUEL project, contributing its expertise and resources to achieve the project's objectives. Here are the key responsibilities and activities of the Institute of Transport within the project SUPERALFUEL.

1. The involvement of the Institute in Work Package 1 (WP1) is a key step towards the use of alternative fuels in port areas. This will assist in drafting the necessary reports and documentation, ensuring that all stakeholders have access to the latest information on alternative fuels.

The Institute of Transport will also participate in Activity 1.1, which focuses on the analysis of national and international legislation and regulations concerning alternative fuels. This includes:

- Conducting a comprehensive review of existing laws and standards that regulate the use of alternative fuels in port areas.
 - Drafting and analyzing relevant documents to identify shortages and fields for improvement within the legal framework.
 - The Institute will commit to providing specialized assistance in drafting detailed reports that will present the results of the gap analysis. This includes providing in-depth insights knowledges and strategic recommendations based on a careful assessment of regulations and technical standards in the field of alternative fuels.
2. Within Work Package 3 (WP3), the Institute of Transport will lead the establishment of a network of experts focused on sustainability, safety, and training for alternative fuels in

ports. This network will facilitate collaboration among various stakeholders and enhance knowledge exchange.

3. The Institute will implement a risk assessment methodology in Albanian ports to promote safety during the storage of hydrogen/methanol. This includes the development and implementation of safety protocols and risk management strategies.
4. The Institute will also lead the development of a training program framework (Activity 3.1) aimed at educating port operators and stakeholders on environmental safety and technical issues related to the implementation of alternative fuels in maritime transport.
5. The Institute of Transport will utilize its expertise in transport studies and data management to support the project's research efforts, ensuring that relevant data is collected, analyzed, and utilized effectively.
6. Also, the Institute of Transport it will participate in all project meetings, teleconferences, and seminars, contributing to discussions, exchanging knowledge, and collaborating with other project partners.

Conclusion: The SUPERALFUEL project represents a significant step towards achieving sustainable maritime transport in the Adriatic and Ionian regions. By fostering collaboration among various stakeholders and promoting the use of alternative fuels, the project aims to create a cleaner, safer, and more efficient maritime transport system.



The first Meeting in Athens 2024.