

 Co-financed by the European Union
Connecting Europe Facility

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GAINN4MoS Partners:



MIT (Italian Ministry of Infrastructure and Transport) Implementing Bodies in GAINN4MoS Action:



Sustainable **LNG** operation for ports and shipping-innovative pilot actions

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The GAINN global project aims at supporting EU Member States policy-makers, ports and shipowners operating in the EU Atlantic and Mediterranean countries to comply with Marpol Annex VI and Directive 2012/33/EU in the most efficient way, by facilitating the growth of the use of LNG as marine fuel in the maritime and port logistics industry and to comply with the Directive 2014/94/EU on the deployment of alternative fuels infrastructure.

"GAINN4MOS: Sustainable LNG Operations for Ports and Shipping - Innovative Pilot Actions", coordinated by the Fundación Valenciaport and co-funded by the European Union's Connecting Europe Facility Programme, is a market-sided innovation project.

Carrying out 17 engineering studies on ship retrofitting and/or newbuildings, port LNG infrastructures and bunkering stations, 11 of whom will be developed as pilots.

4 Ship Prototypes and Engineering Studies



SPABUNKER CUARENTA (Valencia)

Type of Vessel: Bunkering Barge
Overall Length: 73.79 m
DWT: 4,200 Tn
Total Capacity of Tanks: 12,623.7 m³

Challenge: Maintaining capacity to supply conventional fuels whilst ensuring safety of operations with different fuels.



TUGBOAT (Leixoes)

Type of vessel: Tractor
Propulsion: Azimuthal

Challenge: Finding space to position the LNG tanks and complying with safe ventilation distances.



Engineering study of ro-pax MV LOBO MARINHO (Madeira)



Engineering study of the containership MV FUNCHALENSE 5 (Madeira)



Three engineering studies of pax or ro-pax vessels (Italy)



MV CORVO (Acores)

Type of vessel: General Cargo Ship
Overall Length: 119.80 m
DWT: 8,893 Tn
Total Cargo Capacity: 610 TEUs

Challenge: Maintaining the ship's autonomy. Several LNG storage alternatives will be explored, including ISO tanks on board.

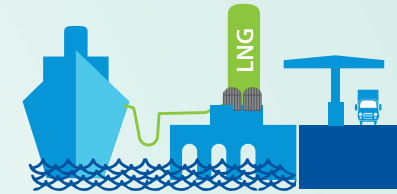


PAX/ROPAX PROTOTYPE (Italy)

Type of vessel: Passenger/Ropax Ship
Total Cargo Capacity aprox.: + 1,000 passengers + 600 line meters

Challenge: Lack of LNG bunkering services in Southern Italy and Sicily.

LNG Bunkering Stations at Core Ports



Nantes-St.Nazaire



Specific objectives



To provide the core ports of Koper, La Spezia, Venezia, Fos-Marseille and Nantes - Saint Nazaire, with initial pilot infrastructures in the cases of Koper and Italian ports and with fully operational LNG break-bulking stations in Fos-Marseille and Nantes-St Nazaire required to comply with Directive 2014/94/EU on the deployment of alternative fuels infrastructure.



To generate an initial demand for the Italian LNG bunkering infrastructures with the retrofitting/ newbuilding of one pax or ro-pax vessel included in this project.

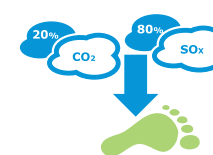


To share results obtained with at least 30 EU ports and 20 sea carriers not participating directly in the project via 8 large scale communication events and by their participation in the Stakeholders Interest Group.



To contribute to the development of the European Union LNG and maritime industry and shipyards: at least 200 employees in 4 European shipyards and 30 additional employees in sea carriers will be working in the retrofitting/newbuilding of 4 prototype vessels and in the vessels themselves.

To contribute to the development of the European Union LNG industry at ports: at least 35 employees will be working directly in the LNG bunkering stations in core ports .



To foster greener, safer and sustainable maritime transport by reducing operational costs associated with fuel consumption on average by 30% with the retrofitting/newbuilding of 4 vessels.

To reduce CO₂ emissions by 20% (on average) and sulphur emissions by 80% (on average) with the retrofitting/newbuilding of 4 vessels.