



## *Recent projects on small and medium-sized ports in Sicily for transport sustainability and resilience*

FACULTY OF ENGINEERING AND ARCHITECTURE  
UNIVERSITY OF ENNA KORE research group  
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# University of Enna Kore Italy -Research group

## RESEARCH INTEREST

- **Sustainable Mobility**
- Smart Mobility and MaaS
- Shared Mobility
- **Transport Planning and Management**
- **Network Design**
- Transport Demand Modelling
- Participatory planning
- Project management (BIM,LCA...)
- Decision Support System
- Road network simulation

## UNIKORE RESEARCH AREA -PORT SECTOR

- **planning and development of smart ports**
- **cold ironing analysis**
- **environmental impact analysis related to port infrastructures**
- port master plan
- remediation and reuse of materials from dry docks
- analysis of impacts from fish processing oil spills at sea

## RESEARCH GROUP

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## Small & Medium Ports – Sicily case study

The ports of the Sicily are located in three different coastal areas, the Ionian (East), the Tyrrhenian (North) and the Mediterranean Sea (South-West).

The smaller islands are particularly important for tourism and thus for the local/regional economy



**Sicily 33 ports and 26 small and medium-sized marinas**

The main ports (HUB) are Palermo, Catania and Messina. The ports of Trapani, Palermo and Messina respectively provide connections with the smaller islands.

**Sicilian ports policy**

- **Development of new port infrastructures**
- **Developing plan for leisure/recreational boating**
- **Definition of Project for Sustainable and resilient mobility**

**Decarbonisation strategies and work in progress projects**

# Small & Medium Ports –Sicily case study and relative projects



## TYPES OF PORTS

PORT HUB

MARINAS

EQUIPPED PORTS

MINOR HARBOURS

INVESTIGATED PORTS



# Small & Medium Ports -The ports of western Sicily become "smart": focus on environmental sustainability and innovation (Jan 2021)



The ports of western Sicily become "smart"

*This project aims to start a process of energy transition and to make the ports of Western Sicily sustainable and smart through innovation, digitisation of port logistics systems, the energy efficiency of ports and renewable energies.*



Port of Palermo  
"control room" and  
the other small ports  
are satellites

# Small & Medium Ports -The ports of western Sicily become "smart": focus on environmental sustainability and innovation (Jan 2021)



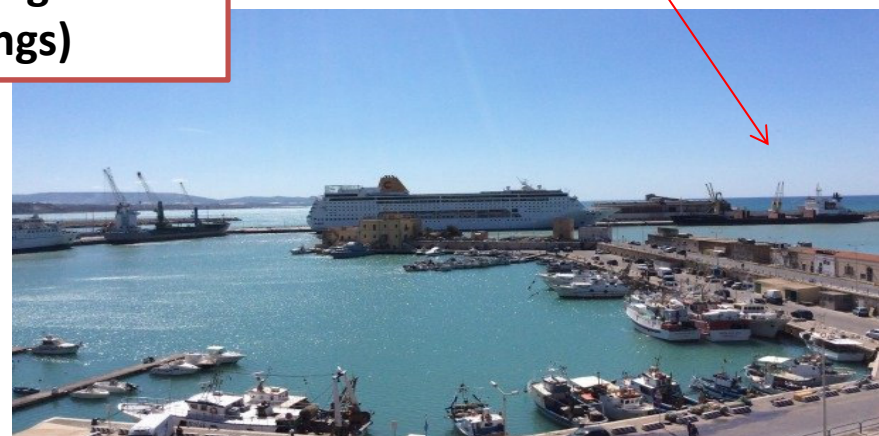
Termini Imerese



**integrated energy efficiency measures and the introduction of innovative smart technologies and IoT (Internet of things)**



Trapani



Porto Empedocle



## Small & Medium Ports - North Sicily :Messina and Milazzo, increasingly green ports. Cold-ironing will reduce ship emissions



**Starting from the end of 2019, the Port Authority of Messina has been carrying out projects to build electrification systems for the quays to ensure the power supply of ships stopped in port.**

This is a project that has been adopted in only a few Italian ports yet, which makes it possible to considerably reduce the fumes emitted by fuel combustion inside the port area.

**The Port Authority of Messina has long been attentive to environmental issues, having already implemented LED lighting in the port areas and launched studies on the feasibility of LNG deposits.**

## Small & Medium Ports - North Sicily :Messina and Milazzo, increasingly green ports. Cold-ironing will reduce ship emissions



**Inaugurated in 2001, this infrastructure can accommodate up to 140 boats, with no draught limits, up to a maximum length of 50 metres.**

The moorings are made with floating aluminium jetties and the port has a floating concrete dam to protect the water.

**Geographically, Milazzo is the closest point of departure on the north coast to the Aeolian Islands, a popular destination for yachtsmen due to their natural and archaeological beauty.**

**In the port of Milazzo the service will involve all the docks that are now used both for technical-nautical services, for ships and for ferries that carry out the service for the Aeolian Islands and merchant ships.**



## Small & Medium Ports -Eastern Sicily: sustainable mobility project at the port of Augusta



***The ports of Eastern Sicily focus on sustainable mobility and energy efficiency in ports.***

A tender was recently launched to identify the best project idea for the construction of an onshore or floating coastal storage of liquefied natural gas (LNG) within the Port of Augusta, Core Port of the Ten-T Network.

***The area covered by the proposed project is located within the Port of Augusta (SR).***

**The project envisages different methods of supplying Liquefied Natural Gas for shipping and also for land transport vehicles.**

**Thanks for your attention!**

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