



The holiday residence of "Bagheera" in Corsica is engaged in several types of actions in favor of an environmental approach (composting waste, solar heater and hot water, transformation of green waste in animal feed, electrical gardening equipment ...). All of these actions allow the company to obtain the "Clé verte" label and the "Envol" brand. The domain is engaged in terms of biodiversity and is classified in refuge zone by the Lique of Protection of Birds.

Livorno Port Authority is engaged in a project to develop LNG storage and refueling facilities (GAINN Global Project).

According to this action, the maritime area between Northern Tyrrhenian and Ligurian sea has the right features in order to become the first Mediterranean complete LNG distribution network. The use of LNG as alternative fuel is an opportunity not only for maritime transport (off-shore), but also for in-port activities, such as terminal operations, and industries' activities close and related to the port.



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**TO AN ALTERNATIVE CHANNEL** 

State of the art of carbon emission study for **Corsica Channel** and the opportunities for the future

#### PASSAGE Interreg Europe

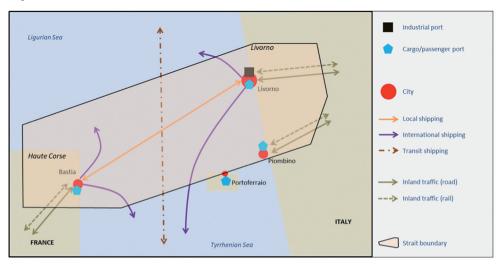


## TO AN ALTERNATIVE CHANNEL

### State of the art of carbon emission study for Corsica Channel and the opportunities for the future

#### Main challenges for the study

The Corsica Channel is the 80 km width strait between the north-eastern French Corsica Island area and the Italian Province of Livorno sea coast. Within this area, different activities take place and might generate significant GHG emissions. The main economic activities are industry (notably, Livorno port area) and tourism, on both shore of the strait. They induce sea-based emissions related to four ports: Livorno, Piombino and Portoferraio in Italy, and Bastia in France. The maritime traffic between these ports (local traffic and traffic with calls at the ports) and through the Corsica Channel (transit cruise) consists, in fact, in a mix of industrial and freight traffic on one hand, and in passengers on the other hand. The province of Livorno is the most important  $CO_2$  emitter in Tuscany region.

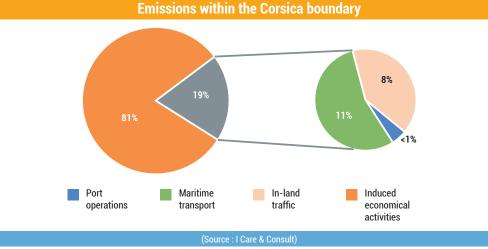


Schematic "choreme" representation of the Corsica Channel (Source: I Care & Consult)

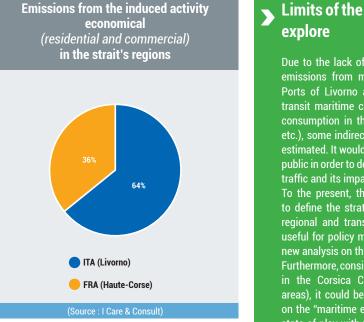
#### > Main findings and key figures

The Corsica Channel emitted 5.2 MtCO<sub>2</sub>e<sup>1</sup> in 2016. According to the data at disposal, the main source of emission is the induced economical activities with 81% of the total emissions, followed by the maritime transport with 11% of the emissions, the inland transport representing 8% and the port operations representing less than 1%. The emissions are mainly impacted by the industries in Livorno.

<sup>1</sup>Mega-tonnes of carbon dioxide equivalent



The induced economical activities concern the industries and cities (residential and commercial emissions from energy consumption) which occur only within the strait's boundary and they represent 4 177 ktCO<sub>2</sub>e. With regard to the industries, many of them (refineries; oil stock areas; energy power station; chemical and automotive groups) are close to the Ports of Livorno and Piombino and they are responsible for the emissions of 3 570 ktCO<sub>2</sub>e in 2016. As for cities, the emissions are based on the number of inhabitants in the NUTS 3 region , which shore correspond to the strait (Livorno and Haute-Corse). They emitted about 606 ktCO2e in 2016. Considering both activities, the Italian coast of the strait is responsible for the majority of the emissions, as represented in the figure below.



<sup>2</sup> European Nomenclature of Territorial Units for Statistics

# Limits of the study / Areas to further explore

Due to the lack of data (such as the out-boundary emissions from maritime cruise with calls to the Ports of Livorno and Piombino, the out-boundary transit maritime cruise, the emissions from energy consumption in the ports of Bastia and Piombino, etc.), some indirect emissions sources could not be estimated. It would be interesting to make these data public in order to deepen the analysis on the maritime traffic and its impact at local and cross-border level. To the present, this study is extremely interesting to define the strategic development plans at local, regional and transnational levels, but to be really useful for policy makers it could be enriched with a new analysis on the maritime traffic.

Furthermore, considering the several ongoing projects in the Corsica Channel (and related boundaries areas), it could be remarkable to have a new study on the "maritime emissions", comparing the current state of play with the new situation, to measure the real impact and the success of these actions.