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ANCHOR Life

Advanced Noise Control strategies in HarbOuR

Report of Follow-up activities

Action B.1

Development of “Figures of Merits” governance on noise and application to Livorno Port

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1. Introduction

The COVID-19 has impacted much on ports traffic and total handling. On average, most ports reported huge traffic loss and except Antwerp, all major European hubs in the first half 2020 saw a sharp throughput decline. Of course, passengers' traffic was the most hit, with drops in average in 70-80% of observed ports¹.

Livorno was not, in this troublesome waters, an exception, as in the first half 2020 a minus 16.6% of total throughout has been recorded: cruise passengers nearly relinquished the port, with a loss of 93 % and forestall products only manage to report an increase of 8%.

This brief overview helps us in understanding how port economics has been affected by the crisis. Port employment has fallen as a consequence of lower traffic, and total revenues from port activities have deeply contracted.

National and local authorities have moved to tackle the downturn effects and to mitigate the losses on the companies' balance sheets. One measure, common to European countries, has been the suspension of port fees and dues, especially port concessions fees and the anchoring fee. Other, more long term measure, envisage the revival of port investment programmes and the strengthening of financial envelopes related to port infrastructures. Among several core investments, that have been prioritized by the Italian government, two large projects are related to ports (one in Genova, namely a new breakwater, and one in Livorno, notably the new Darsena Europa).

In this framework, environmental objectives have been not faded, even if the focus has shifted much more on the health and economic crisis.

In the following, we will provide a follow up on the implementation of activities related to the Figures of Merit in the port of Livorno.

¹ Porteconomics.eu: Eleventh bi-weekly issue of IAPH-WPSP Port Economic impact barometer confirms overall improvements

2. The acoustic problem in Livorno: how is perceived

The map beneath reports on the acoustic levels observed in the port of Livorno, shortly before the outbreak of the COVID-19 crisis.

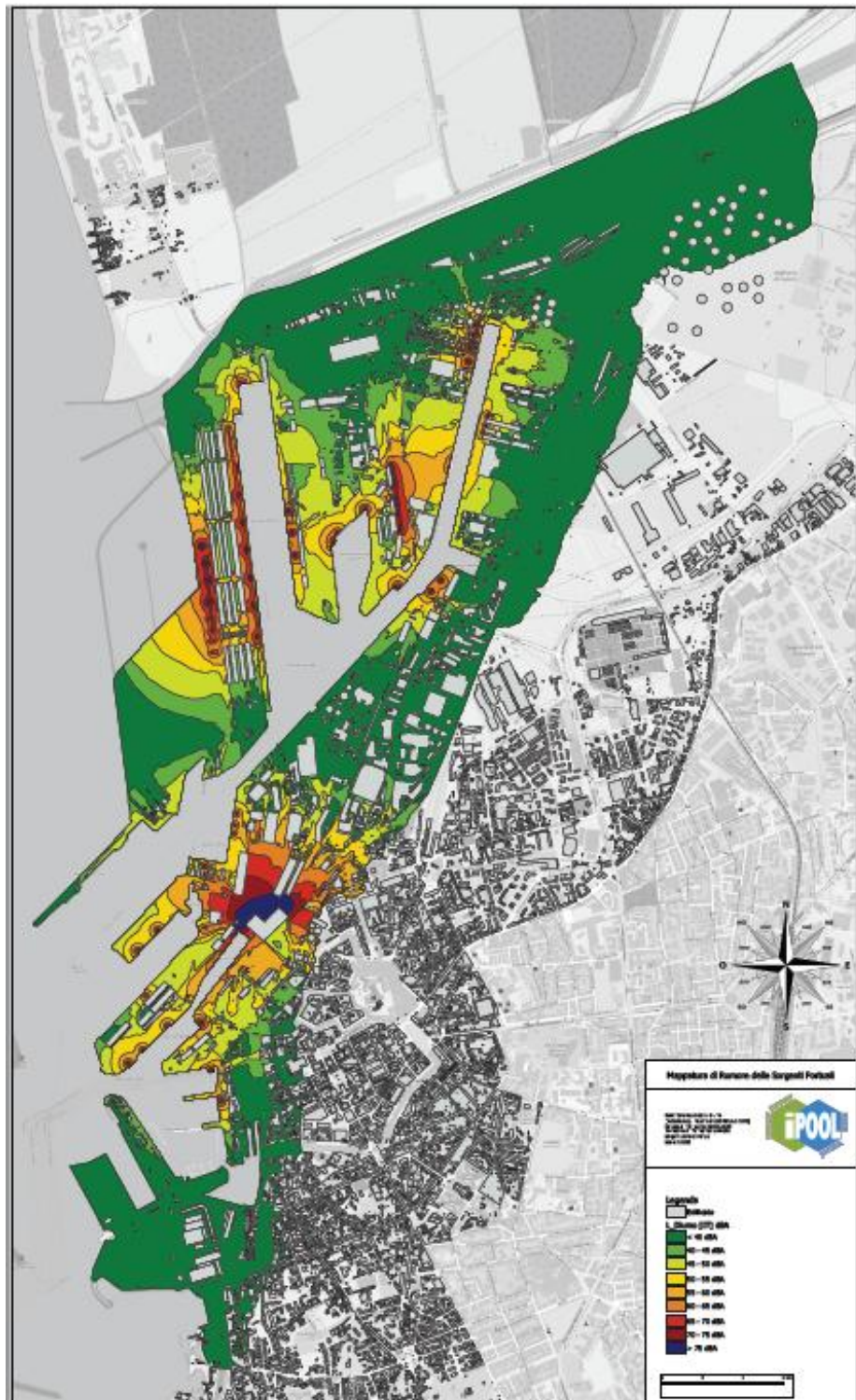


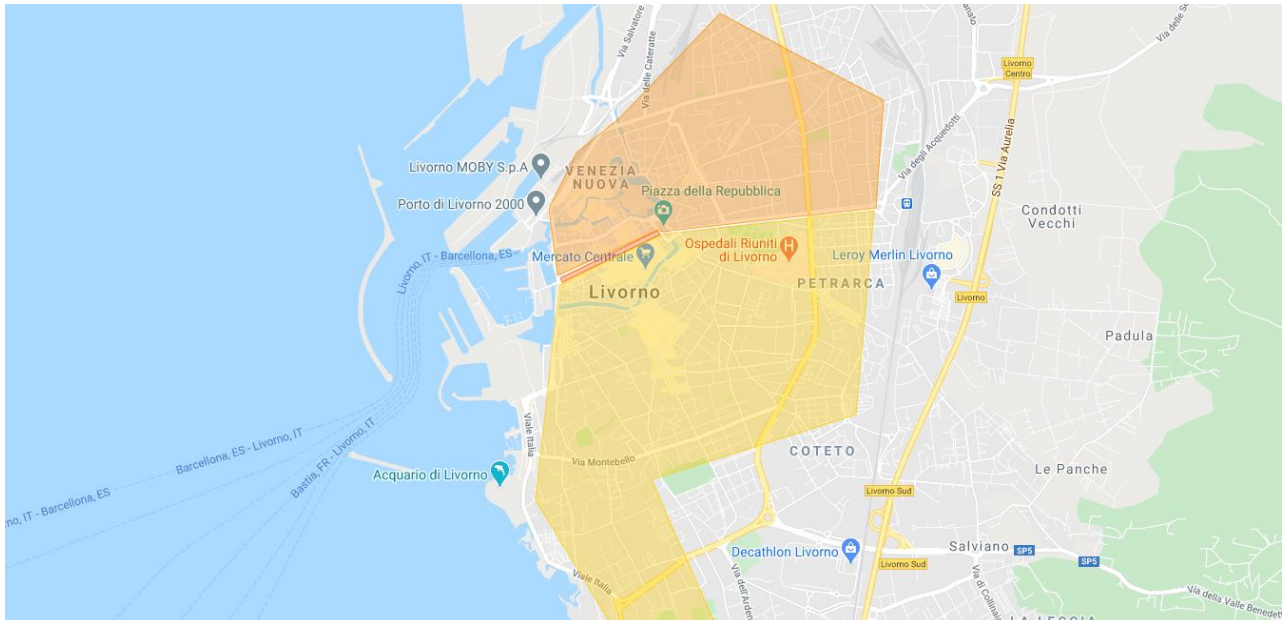
Figure 1, port sources noise mapping, Livorno, source Interreg Maritime IT-FR project MON ACUMEN

We can highlight that the more polluted areas are those located in proximity of berths and shipyards, actually not far away from the city centre.

Nonetheless, in the citizenship's perception of the issue, we may notice a quite different pattern: the norther boroughs of the city are those that suffer most from acoustic pollution, and where residents complain most on acoustic level (orange colored area), while southern boroughs, which are indeed closer to shipyards, report less complaints on noise levels.

More in general, in a large port city like Livorno, noise is perceived less as an issue in association to port activities, despite the port traffic related. Complains on noise are more common in the Northern boroughs, which are indeed closer to port areas.

Figure 2, noise levels perceptions in the city of Livorno, source Interreg Maritime IT-FR project TRIPLO



3. Figures of Merit: how to implement it

Port traffic volumes have nearly collapsed in the first half 2020, in the aftermath of the COVID-19 outbreak. A drop of 16.6% has been reported, with some traffic flows that have almost halted, like cruise traffic, or passenger traffic in general. Car traffic halved, whereas only forestall products succeed in increasing throughput.

These negative figures have deeply reshaped port noise levels and, even more importantly, have affected balance sheets of port operators and logistic companies. Overall in Italy, port and logistic companies have reported a loss of 30% turnover and, if the crisis is going to carry on, a more severe decline of 50% is likely to happen.

The rationale behind the proposed Figures of Merit is to incentivize private operators in tackling noise emissions and to intervene to lower acoustic pollution. As a means to encourage a more sustainable behavior, rebates on port concession fees would have been envisaged, as a tool to encourage investments and to recover at least partially the related financial commitments.

This rationale has, as a result of the present crisis, lost meaning, since port companies are struggling in keeping port activities at pre crisis levels and are benefitting from temporary port dues and fees suspensions and rebates². As a consequence, rebates have been already granted to many port companies and are linked to current traffic losses, irrespective of past or present noise levels.

This situation has undermined the significance of the introduction of Figures of Merit, taking into account that the focus of port regulators in Europe has been massively shifted to the saving of port jobs and turnover.

Nonetheless, the project's partner ADSP MTS has proposed an alternative output, that ensure that the benefits linked to the introduction of Figures of Merit are thoroughly assessed and simulated even if not implemented in real conditions.

The proposed simulation is based on the following:

² See, in this respect, Regulation (EU) 2020/697 of the European Parliament and of the Council of 25 May 2020 amending Regulation (EU) 2017/352, so as to allow the managing body of a port or the competent authority to provide flexibility in respect of the levying of port infrastructure charges in the context of the COVID-19 outbreak. The suspension timeframe spans from march till October 2020

- Reliable acoustic data are already available, since the acoustic mapping was released on February 2020, shortly before the COVID-19 outbreak, with data which mirror the average port activities;
- Acoustic mapping, based on CNOSSOS model, points out all relevant noise sources (port and industrial activities, road traffic, vessels' operations and so on), thus delivering a global picture of noise levels within and in the vicinity of port areas.
- Simulations are an analysis on how certain noise levels, essentially those referred to port activities, can be lowered if the envisaged port operations are accomplished in accordance with Figures of Merit. Simulations are therefore an indirect measurement of how noise can be reduced if the proposed measures are effectively implemented. An ex ante and ex post assessment will be accordingly delivered.
- A simulation on possible financial measures to support the transition towards more sustainable patterns will be also envisaged.

The proposed alternative output is also useful in the light of wider acceptance of the Figures of Merit, once the crisis will be over. The availability of data on benefits, directly linked to a more responsible port management, is essential to ensure that this measure can be effectively put in place. After having delivered the Figures of Merit, a dissemination activity is envisaged, to highlight the outcomes expected from the Figures of Merit's introduction.



4. Results

The COVID-19 outbreak has deeply impacted on everyday port operations, jobs and turnover across Europe. Port throughput has lost dramatically ground and port regulators have tried to tackle the crisis through substantial rebates and port fees reductions. Anchorage taxes, port fees have been cancelled in the first half of 2020. Despite of this, port traffic volumes are far to have recovered. A full recovery will not occur even in 2021, if following waves of the global pandemic happen. In the third quarter 2020, the UNCTAD estimated a drop of 5% of global trade, while the yearly figure will project likely a 7-9% decline³.

ADSP MTS has therefore proposed to carry on activity on B1, through a simulation study on how the Figures of Merit could work in the port of Livorno. This document will help in proving the soundness of the solution and the possible benefits of curbing noise emissions, with the proactive involvement of port operators.

³See, inter alia, <https://unctad.org/news/global-trade-shows-frail-recovery-third-quarter-outlook-remains-uncertain>