

# POLICY RECOMMENDATIONS FOR THE EUSAIR

Activity 5.2

DELIVERABLE D.5.2.1

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## 1. INTRODUCTION

### 1.1. The SUSPORT Project

Maritime transport is the most sustainable way of transporting goods from the environmental and energy point of view. Also, the commercial ports, located near cities, play an essential role in the transport logistics system, as they allow the connection between the maritime and land routes, and represent an important factor for the growth of the economy and employment. It should be noted, however, that while maritime transport is the most sustainable way of transporting goods, port operations have an impact on air quality and greenhouse gas emissions.

The improvement of environmental sustainability and energy efficiency in port areas is a very challenging objective, due to the geographical and economical complexity of these areas and the large number of stakeholders and entities contributing to the pollutants emissions. They include port authorities, private companies, dealers, shippers, service providers, shipping companies, etc. In the last decades, increasing attention has been paid to these topics, especially in the European context. This led to a large number of actions devoted to reducing the emissions of pollutants and developing new tools and policies to reduce the environmental impact of navigation and port operations. In this context, the SUSPORT project aims to provide its contribution.

**SUSPORT (Sustainable Ports) Project**, co-funded by the Interreg Italy-Croatia Cross-Border Cooperation Programme, has the main objective of improving the environmental sustainability and energy efficiency in ports in the Programme area by improving cooperation of key stakeholders – institutions and long-term management activities in this area of work on both sides of the Adriatic Sea.

Ports of the Programme area do not have a common model of environmental planning and energy efficiency, and adopt mitigation measures in a non-coordinated way, with a non-homogeneous result in terms of environmental protection. SUSPORT intends to strengthen the institutional capacity and cross-border governance of the ports of the Programme Area in this sector, enhancing the environmental sustainability and energy efficiency.

**SUSPORT brings together 17 partners that represent the starting point of cooperation from Italy and Croatia.**



*Figure 1- The SUSPORT project partnership.*

Through SUSPORT, all ports involved in the project, will be able to share best practices, analyze the situation and develop common methodologies for environmental sustainability and energy efficiency, to be tested in concrete pilot actions significantly improving the environmental performance of maritime transport in the whole Programme Area.

SUSPORT has foreseen the implementation of **13 pilot actions** on environmental sustainability and energy efficiency of port operations, testing the cross-border action plan and the local implementations in order to improve the overall environmental performance of all activities related to port and land-interface maritime transport in the Programme Area and support the role of ports as green gateways.

The main result of SUSPORT is the enhancement of institutional capacity of the ports of the Programme Area in the key issue of environmental sustainability and energy efficiency, in a perspective long-term cooperation.

In particular, SUSPORT aims to achieve the following specific results:

- 1. New planning documents of Italian and Croatian ports setting priorities and time frame** for enhancing environmental sustainability and energy efficiency of maritime transport. In particular, a fruitful exchange of experiences and analysis of best practices will provide staff

from all ports in the area with a solid knowledge base to improve their planning skills.

2. **Reduction and monitoring of environmental impact of maritime transport.** In order to assess the effectiveness of different alternative measures, a comprehensive picture of the existing emissions for the area is required. To this end, all the ports involved in the SUSPORT project have been required to provide data to assess the emissions of Green House Gasses (GHG) according to a common methodology which considers both terrestrial and maritime sources.
3. **Creation of a permanent cross-border cooperation structure** on environmental sustainability and energy efficiency of maritime transport. Based on the results achieved, SUSPORT will develop a cross-border strategy to strengthen port environmental sustainability and energy efficiency, which the project partners will commit to applying in the medium and long term by signing of a joint protocol, which will lead to institutionalization of a permanent cross-border cooperation network.

Since the quality of a project depends largely on an adequate composition of its partnership, able to pool all skills and competences of relevant institutions in order to achieve the set of project results and having the capacity to create strong links to target groups addressed by the project, the territorial involvement has generated the following results in terms of **entities/subjects directly touched by the project fulfillment:**

- 13 municipalities - Trieste, Monfalcone, San Giorgio di Nogaro, Venezia, Chioggia, Ravenna, Ancona, Bari, Rijeka, Zadar, Split, Ploče and Dubrovnik
- 9 regions - FVG, Veneto, Emilia-Romagna, Marche, Puglia, Primorje-Gorski, Zadar, Split-Dalmatia, and Dubrovnik-Neretva
- 12 ports - Trieste, Porto Nogaro, Venice, Ravenna, Ancona, Ortona, Bari, Rijeka, Zadar, Ploče, Dubrovnik, Split
- 2 scientific subjects - Venice International University, ITL Emilia-Romagna



*Figure 2- Geographical area of interest of SUSPORT.*

Furthermore, some institutional subjects have been involved into the project on a cooperation level:

- 3 European Macro-strategies - EUSAIR, EUSALP, EUSDR
- 2 national Ministries of Transport – Italy, Croatia



## 1.2. Relevant Objectives

SUSPORT aims at setting relevant objectives to be pursued within the abovementioned recommendations, to contribute to the topic of the development of environmental sustainability and energy efficiency of ports and **to be considered by all Institutions and Subjects that can determine the successful development of sustainable port environment:**

- **OBJECTIVE\_1: To enhance the competences of involved ports on environmental sustainability and energy efficiency.**

SUSPORT will increase the skills of all ports in the Programme Area in improving joint planning of environmental sustainability and port energy efficiency through a constant exchange of experiences between partners and a benchmark analysis with best practices at European and international level. In particular, the common points and the differences between the ports of the Programme Area and those in which there are already advanced experiences in this sector, such as Barcelona, Antwerp, Rotterdam, the North Sea and California will be analyzed. Indications and suggestions will be drawn up that can also be replicated in the Adriatic.

- **OBJECTIVE\_2: To harmonize measures and policies on port environmental sustainability and energy efficiency.**

The knowledge learned will be transferred into a common cross-border model of port environmental sustainability and energy efficiency, which will be developed in each port and tested by project partners through complementary pilot actions, allowing ports to combine environmental protection and efficiency in the transit of goods. Experimentation in different areas related to environmental sustainability and energy efficiency and the related exchange of experiences will have a multiplier effect on the competences of the partners, who will be able to replicate the results in their own territories, thus harmonizing environmental and energy policies.

- **OBJECTIVE\_3: To provide a strategic framework for port environmental sustainability and energy efficiency.**

The results of the project will be included in a cross-border strategy to strengthen port

environmental sustainability and energy efficiency, which will be applied in the medium and long term by the project partners, signatories of a joint protocol. Therefore, SUSPORT will create an institutional platform for long-term cooperation, cross-border governance of environmental sustainability and energy efficiency that will allow information, knowledge and, best practices to be shared in a long-term perspective, also contributing to EUSALP, EUSAIR and EUSDR.

### **1.3. Aim of the Document**

In the framework of WP5 (“Providing a strategic framework for enhancing port environmental sustainability, energy efficiency”) and activity 5.2 which is laying the basis for the cross-border strategy and macro-regional strategies, the deliverable D.5.2.1 aims at addressing a specific set of policy recommendations to the macro-regional strategy EUSAIR to push the pillar 2 – “Connecting the Region” that is fully consistent with the SUSPORT project.

More specifically, after a short presentation of the EU macro-regional strategy EUSAIR (Chapter 2), with a special focus on pillars and coherence with the project (Chapter 3), the document will proceed with a brief overview of the methodology of the project with the pilot actions and their main outcomes (Chapter 4), and the coherence of the project with other relevant policies and plans (Chapter 5).

Lastly, Chapter 6 will deal with the general policy recommendations to be conveyed to the EUSAIR macro-regional strategy. These policy recommendations, in fact, are crucial to ensure a more efficient streamline and roll out of results achieved and lessons learned by partners throughout the project lifetime, thus benefitting not only the macro-regions, but also the European territory overall.



## 2. THE EUSAIR STRATEGY

The **EU Strategy for the Adriatic and Ionian Region (EUSAIR)** is a macro-regional strategy adopted by the European Commission and endorsed by the European Council in 2014. The Strategy was jointly developed by the Commission and the Adriatic- Ionian Region countries and stakeholders, which agreed to work together on the areas of common interest for the benefit of each country and the whole region.

The EU Strategy for the Adriatic and Ionian Region is one of the four EU macro-regional strategies, besides the EU Strategy for the Baltic Sea Region (EUSBSR - 2009), the EU Strategy for the Danube Region (EUSDR - 2011) and the EU Strategy for the Alpine Region (EUSALP - 2016).

The EUSAIR covers nine countries: four EU Member States (Croatia, Greece, Italy, Slovenia) and five non-EU countries (Albania, Bosnia and Herzegovina, Montenegro, North Macedonia, Serbia).



*Figure 3-  
EUSAIR participating countries.*

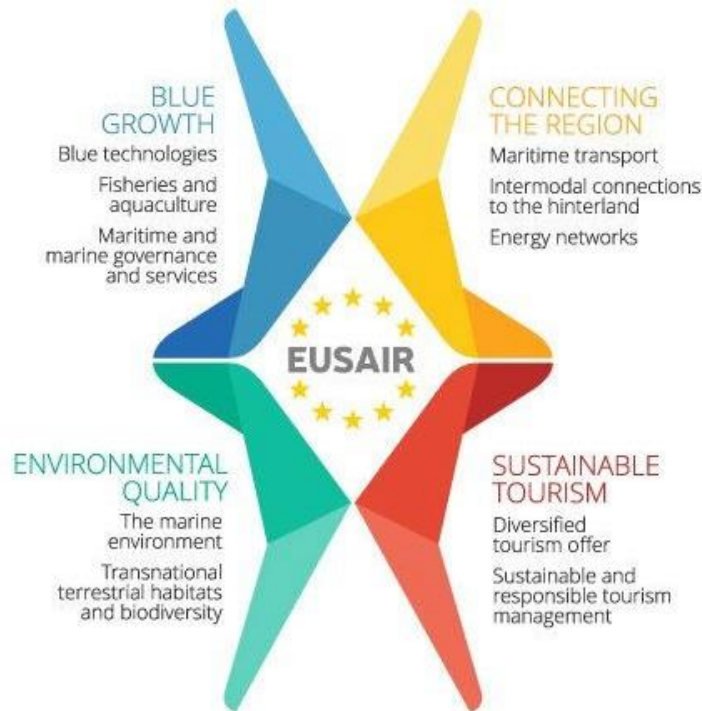
### 2.1. Four Pillars of the EUSAIR Strategy

The general objective of the EUSAIR is **to promote economic and social prosperity and growth in**

the region by improving its attractiveness, competitiveness, and connectivity. With four EU members and four non-EU countries the strategy will contribute to the further integration of the Western Balkans.

The participating countries of the EUSAIR agreed on areas of mutual interest with high relevance for the Adriatic-Ionian countries, being it common challenges or opportunities. The countries are aiming to create synergies and foster coordination among all territories in the Adriatic-Ionian Region in the four thematic areas/ pillars:

- PILLAR 1: BLUE GROWTH
- **PILLAR 2: CONNECTING THE REGION** (coherence with SUSPORT project)
- PILLAR 3: ENVIRONMENTAL QUALITY
- PILLAR 4: SUSTAINABLE TOURISM



*Figure 4- EUSAIR pillars.*

## 2.2. EUSAIR Governance and Management Architecture

**Governance** in macro-regional strategies is not about new funds nor bureaucracy, but how and by whom the strategies are implemented, and joint actions initiated and financed. Governance must have both a political and operational dimension, with line ministries and implementing bodies setting strategic objectives, and then making sure the work is strictly followed up. This will give clearer results and greater impact.

In addition to the political level, consisting of Ministers for EU Funds and/ or Ministers of Foreign Affairs of nine participating countries taking strategic decisions at the EUSAIR Annual forums' ministerial meetings, the EUSAIR architecture involves two main levels: the coordinating level represented by a Governing Board and the implementation level represented by Thematic Steering Groups. Operational support to both levels is provided by the EUSAIR Facility Point strategic project.



*Figure 5- EUSAIR Governance scheme.*

The **Governing Board** (GB) coordinates the work of the Thematic Steering Groups (TSGs) in charge of implementation through strategic guidance with respect to management and implementation of the EUSAIR and its Action Plan. To this end, representatives from the participating countries should be duly empowered by their respective Governments.

Four **Thematic Steering Groups** (one per pillar) have been set up. Special arrangements are being set under Pillar 2, with two sub-groups for transport and energy, respectively.

The “**EUSAIR Facility Point** Strategic Project – Supporting the governance of the EUSAIR” was established to provide operational support to the key EUSAIR governance actors and implementers in their respective role.

## 2.3. Importance of the Involvement and Engagement of Stakeholders

EU macro-regional strategies represent a successful attempt at implementing territorial collaborative frameworks to exploit the full potential generated by transnational governance.

As a matter of fact, macro-regional strategies allow to better address territorial issues through a multifaceted approach, improving policy coordination in different ways, making it more:

- transnational (coordination between countries);
- multi-sector (coordination between different fields of action to tackle wider issues);
- multi-level (coordination between actors at different levels – supranational, national, regional, local).

Such a framework requires the contribution of every single actor to reach its full potential and provide efficient solutions to current issues and innovative perspectives for sustainable development.

In this purpose, it is crucial that activities involve territorial selected stakeholders and target groups both throughout the implementation of projects and in the definition of EU macro-regional strategies, thus fostering a bottom-up approach and making macro-regional outcomes relevant and in line with the issues actually faced by citizens and territories.

This concept represents a horizontal aim that has been pursued by the SUSPORT project through different activities, including several deliverables within the WP5 that aimed at upholding the main findings and recommendations resulting from the project at the transnational level of EU macro-regional strategies like EUSAIR, thus representing the point of view of project partners as well as local and regional stakeholders involved in the project through its activities.

Therefore, enhancing cooperation plays a pivotal role both in increasing competences at the local level and mutual learning among ports of different countries, and joint medium and long-term planning.

### 3. THE EUSAIR STRATEGY MATCHING WITH SUSPORT PROJECT

The EUSAIR Strategy for Adriatic and Ionian Macro Region is articulated on specific pillars, of which the second one “Connecting the Region” is strongly related to the topic of maritime transport and energy networks dealt with the SUSPORT Project.

More specifically, SUSPORT is totally coherent with the EUSAIR Plan of Action, in particular:

1. Maritime transport: Action "Adoption of a common framework for the development of green shipping solutions as the necessary facilities for bunkering with alternative fuels (LNG) and cold ironing in Adriatic-Ionian ports.
2. Intermodal connections to the hinterland.

Additionally, SUSPORT is coherent with the priority n.1 of Pillar 3 "To ensure a good environmental and ecological status of the marine and coastal environment by 2020 in line with the relevant EU acquis and the ecosystem approach of the Barcelona Convention".

#### **SUSPORT – AN EUSAIR LABELLED PROJECT**

SUSPORT has been labelled as EUSAIR Project because it is fully coherent with these two action priorities of the Macro Strategy, being able to provide a contribution to strengthen the institutional capacity and cross-border governance of the ports of the Programme Area in this sector and enhancing the environmental sustainability and energy efficiency.

Furthermore, SUSPORT, leading the practices devoted to reduce the emissions of pollutants and develop new tools and policies to address the environmental impacts of navigation and port operations, is compliant with another basic concept included in the Action Plan of the EUSAIR, which also became the Flagship Project of the Strategy: The Green/Smart Port Hubs Concept.

### 3.1. The Adriatic-Ionian Green/Smart Port Hubs Concept

The Adriatic-Ionian Green/Smart Port Hubs Concept consists of a port network of the entire Adriatic and Ionian basin from Greece to Italy crossing along all EUSAIR countries including all the ports belonging to the core and comprehensive network of the TEN-T Corridors involved. In line with the goals and objectives of the European Green Deal, seaports in the A-I Region, should be seen as a key priority in pursuing resilience to climate change. On-shore power supply (OPS) is already seen as a significant part of the transition to the new 'zero emission' era and as such it should be further incentivised. In this context the following specific objectives will be pursued:

- Technology testing in ports to identify the technical and operational challenges.
- Mapping of local and macro regional needs and development of network of ports to be transformed in accordance with the developments of the Macroregional Transport Masterplan.
- Development of the required infrastructure to support zero emission actions as well as promotion of interoperability among the ports of the Region through the digitisation of the provided services and the development of innovative ICT (Information and Communications Technology) solutions to support the supply chain. Enhance connectivity to islands from mainland and between islands, boosting short sea shipping green solutions.
- Development of circular economy projects in ports finding solutions in turning waste to products due to their ideal background (proximity to large cities, industries as well as by operating as hosts of ships' waste).

In many EUSAIR States the regulatory framework for the electrification of ports is either already enacted or is about to be. In fact, the proposed flagship is in line with the Alternative Fuels Infrastructure Directive (Directive 2014/94/EU) to prioritise Onshore Power Supply in TEN-T ports by the end of 2025.

There is also another EUSAIR flagship for development and operation of logistics for direct LNG (Liquefied Natural Gas) use as a clean fuel for the Adriatic-Ionian region.

In addition, many projects have already been completed in the Region and others are on-going, preparing the ground for the introduction of cold ironing, electric bunkering, and hybrid ships across the Eastern Mediterranean Sea corridor and to exchange good practices regarding soft and hard environment-friendly solutions for a greener, safer, and more efficient transport system,



practices from which the proposed action could build upon.

SUSPORT Project acted exactly towards this direction: through the application of Pilot Actions that are coherent with the given objectives, the main Italian and Croatian ports in the Adriatic and Ionian Region were able to improve both the environmental sustainability and the environmental efficiency of their port operations.

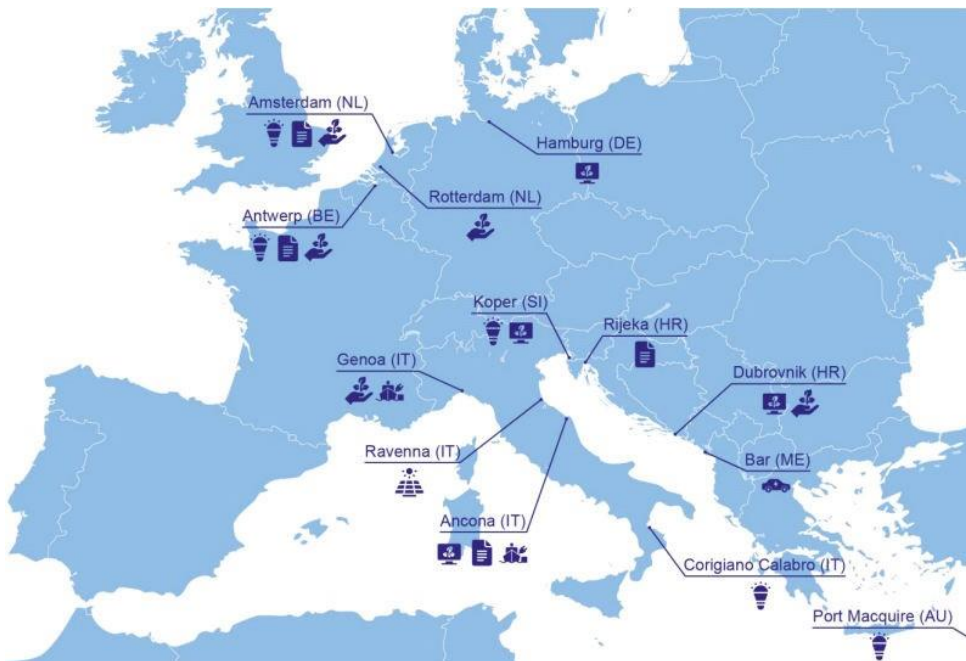
EUSAIR promotes the development of concrete initiatives and SUSPORT appears to be coherent because the state of the art of these kinds of Projects can contribute to create and share a new knowledge basis.

#### 4. METHODOLOGY OF THE PROJECT

The SUSPORT project gathers all the main ports from Italy and Croatia, offering a very useful channel to share past experiences and best practices dealing with port environmental sustainability and the improvement of energy efficiency in port areas. However, to effectively planning the actions to be carried out in the project area, a benchmark analyses of the state of the art in the SUSPORT ports as well as at a European and international level is required. In the project, such an issue is addressed through a Best Practices Analysis (BPA).

In the SUSPORT project, the preliminary phase is devoted to creating the basis for the development of the specific pilot actions planned for the next steps. Two are the main activities carried out in this context: the **Best Practices Analysis (BPA)** and the **Territorial Needs Assessment (TNA)**.

The BPA is carried out by all the partners of the project. The main aim of the collection is to select the most relevant best practices regarding the enhancement of environmental sustainability and port energy efficiency to improve the information sharing among the project partners and the public audience. The contributions deal with technologies, solutions or policies adopted in a specific port or network have been collected without geographical limitations.



*Figure 6- Selected best practices location.*

It can be noticed that most of the best practices are related to European ports. Besides, also best practices dealing with wider networks have been considered. In detail, the ports involved in the Ecoports initiative, and the Adriatic region have been considered, since they have a direct impact on

SUSPORT project area.

The main outcomes of the best practices analysis carried out within the SUSPORT project show that the objectives can be achieved by applying a mix of new technologies (e.g. the replacement of public lighting system, electric cars, cold ironing), renewable energy sources (e.g. photovoltaic panels) and IT systems. In this context, also monitoring devices and data analysis play a key role: they allow the control of the air/water quality and the main sources of pollution (e.g. maritime and road traffic inside the port), thus, feeding better action plans.

Besides, all the port authorities involved in the project also define the **Territorial Needs Assessment (TNA)** to assess the baseline required to measure the future outcomes of the pilot actions as well as to ease its implementation. In more detail, the scope of TNA is to assess the state-of-the-art situation in terms of the carbon footprint of the port area.

In more detail, the scope of TNA is to assess the state-of-the-art situation in terms of the carbon footprint of the port area. Data related to 2019 was employed, including both terrestrial and maritime emissions. Terrestrial emissions comprise electric energy, heating, port service vehicles, port operational vehicles, heavy-duty vehicles, railway tractors. Maritime emissions were decomposed into the ones related to anchored, manoeuvring and moored ships. This initial status was the base for the development of the next steps and the evaluation of project impacts. Besides, to support overall assessment, the involvement of key stakeholders is essential. Hence, TNA elaborated a complete mapping of the local stakeholders in terms of their relevance. Moreover, actions for their active involvement were considered and defined.

Finally, a **Strengths Weaknesses Opportunities and Threats (SWOT)** analysis was carried out to key internal and external factors perceived as important to achieving project objectives. According to the common methodology, each port prepared a document including the peculiarities of each port area, the mapping of stakeholders, the current carbon footprint, and a SWOT analysis to deliver the factors involved in reaching the main project goals.

#### 4.1. From Territorial Needs to Pilot Actions

The analysis provides an overview of the actions that can be carried out to improve environmental sustainability and the energy efficiency of port operations in the Program Area, also by improving cooperation of key stakeholders – institutions and long-term management activities in this area of work on both sides of the Adriatic Sea. **This approach is fully compliant with the vision of EUSAIR Strategy, which sustains an effective level of cooperation.**

Based on the outputs and results of the territorial needs assessments and the best practice analysis, the goal of the subsequent activities was the implementation of concrete pilot actions related to environmental sustainability and energy efficiency of all ports generating freight transport in the Programme Area, as a powerful tool to enhance the ports' overall environmental performance at cross-border level, improving their role as green gateways and corridor roots for the transport of goods.

All ports involved in the project, after exchanging best practices, analysing the situation, and developing action plans in the field of environmental sustainability and energy efficiency, started carrying out their pilot activities as partners. In this context, ports tested several kinds of pilot actions as follows, ensuring a consistent exchange of experiences and expertise:

- replacement of the existing lightning system with LED light bulbs
- installation of photovoltaic and solar thermal systems
- implementation of e-mobility measures
- improvement of the environmental performance of port buildings
- installations of sensors and stations to monitor noise, air and water quality
- pre-investment studies for on-shore power supply

SUSPORT has facilitated the fulfilment of its scope, by generating a lot of studies and analysis on territorial needs, technologies, pilot actions, strategies and by creating events of dissemination such as training seminar, press articles, interviews with institutional subjects and technical conferences.

## 4.2. Main Outcomes Resulting From Pilot Actions

SUSPORT has tried to implement concrete upgrade actions on the port environmental sustainability of ports and improvement of port energy efficiency, but especially to sustain the idea that every single initiative is important and is empowered by cooperation if a coherent framework has been assessed beneath.

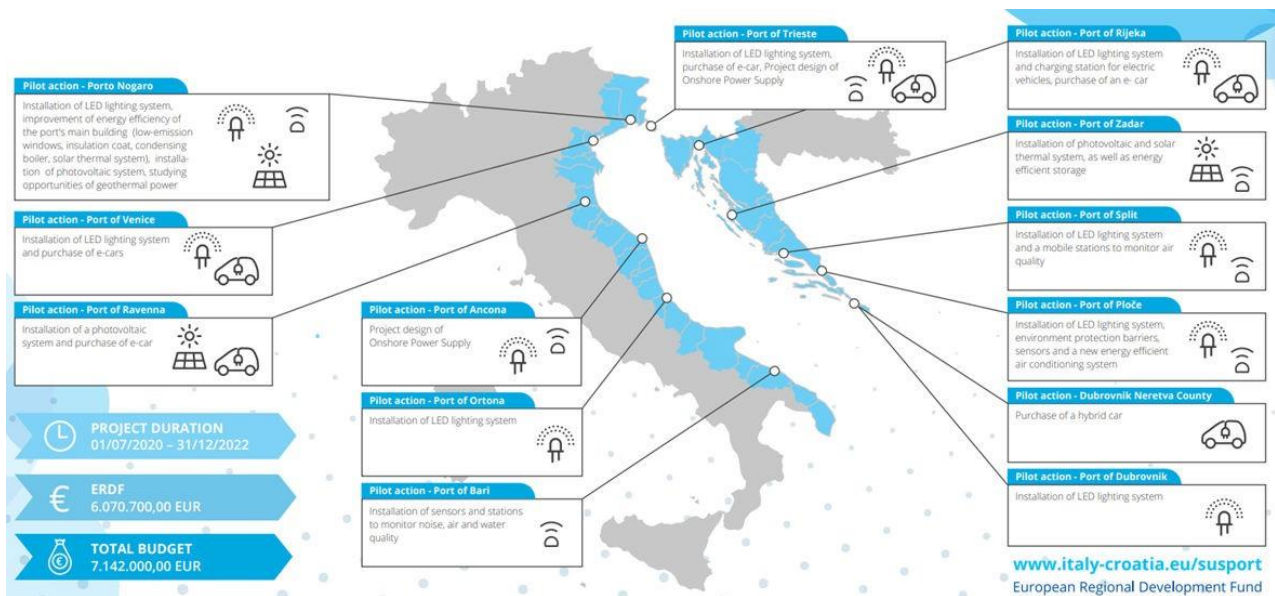


Figure 7- Overview of the pilot actions of SUSPORT project.

All pilot actions have been finalised with the following results coherent with the main objective of improving the environmental sustainability and energy efficiency in ports of the programme area.

For instance, North Adriatic Sea Port Authority also purchased two electric cars that are available now to support the operational and institutional activities of the ports of Venice and Chioggia, 100 percent electric with zero emissions. The purchase of these cars will allow them to further reduce the CO<sub>2</sub> emissions and to travel in a more sustainable and comfortable way also with the complete absence of noise.

Thanks to electric vehicle usage, the Port of Zadar Authority has reduced GHG emissions by 300 kg so far and will continue to do so. Since the vehicle is now charged exclusively from a charger powered by solar panels, it could be said that the vehicle footprint is 0 as energy used is renewable and clean. That means GHG reduction of between 600 and 1300 kg per year.

So far, solar plants have produced 2135 kWh of electricity which is energy equivalent to 643 liters

of gasoline or 760 kg of coal and a reduction of 354 kg of CO<sub>2</sub>.

Another pilot action was purchasing a plug-in electric vehicle (PHEV) to reduce the carbon footprint of DNR (Dubrovnik-Neretva Region) since it can be considered as the most suitable solution for daily use. It is expected that, thanks to the use of the PHEV, DNR will be able to reduce CO<sub>2</sub>eq emissions by 10 tons/year.

Furthermore, by replacing the existing solutions used in public lighting, the Dubrovnik port Authority will reduce energy consumption, improve light technical parameters and traffic safety conditions, and reduce potential risks of environmental pollution due to the use of environmentally unacceptable lighting fixtures and the occurrence of light pollution.

By replacing the existing lighting fixtures with LED lighting fixtures, the installed power will be reduced by approx. 51%. The projected consumption of old lighting for 4,100 operating hours per year is 310,288 kWh. New lighting should consume 151,130 kWh for the same time period. This saves electricity consumption for the period of one year: 159,158 kWh. Additional savings will also be achieved by installing a public lighting management system.

Moreover, thanks to the SUSPORT project, the Southern Adriatic Sea Port System Authority has strengthened its environmental protection action in its port through the acquisition and installation of sensors and stations to monitor noise, air (concentrations of PM, pollutant gases) and water quality (turbidity produced by excavations and ship traffic, solid and hydrodynamic transport to the port mouths), connected to the VEGA system. Through the functions of the multi-parametric probes and VEGA system, the ports belonging to the Southern Adriatic Sea Port System Authority will become “smarter”.

As a result, sustainable development offers many opportunities, such as reducing operating costs (in particular considering reduced energy consumption), increasing the quality of supply, and modern equipment of the entire port (machinery, infrastructure, etc.), promoting and developing the port as a sustainable and green one that advocates public interest and the common good, improving the state of the environment at site level and beyond (reducing noise, pollutant emissions and greenhouse gas emissions to air, light pollution, waste, etc.) which contributes to the satisfaction of local authorities and all citizens with a healthier environment.

## 5. COHERENCE WITH OTHER RELEVANT POLICIES AND PLANS

SUSPORT is consistent with various European, national and regional strategies and policies regarding environmental sustainability and energy efficiency:

1. Europe 2020 Strategy - 20% reduction in greenhouse gas emissions compared to 1990;
2. European Energy Roadmap50 strategy - transition to a low-carbon European economy by 2050 (-80% of greenhouse gases compared to 1990);
3. Directive 2008/50/EU on air quality;
4. Directive 94/2014/EU on alternative fuels
5. Covenant of Mayors Initiative;
6. Ecoports, initiative of ESPO – European Sea Ports Organisation;
7. Decree. n. 169/2016 on the reform of the Italian Port Authorities;
8. Guidelines of the Italian Ministry of the Environment for the preparation of energy and environmental planning documents for port systems (DM n. 408/2018);
9. Croatian Strategy for Transport Development 2014-2030) (improvement of transport connectivity)
10. Regional plan of transport infrastructures, mobility of goods and logistics of Friuli Venezia Giulia and of Veneto Region

Environmental sustainability has been the subject of several European projects, but none of them has addressed the issue of environmental sustainability of ports taking into consideration all ports of the Programme Area. From this point of view, SUSPORT represents an important innovation in the panorama of European cooperation, above all at the territorial level, and is particularly synergistic with the following projects co-financed by the European Union:

1. ECOPORT 8 (South East Europe Interreg Program - completed) – its objective was to promote the improvement of the environmental performance of South Eastern Europe ports;
2. SIMPLA (Program H2020 - completed) - aimed to integrate the SEAPs and the SUMPs, with a view to integrated planning of sustainability at the local level;
3. SUPAIR (ADRION Program - in progress, end: December 2019) – aims to enhance the environmental sustainability of the Adriatic-Ionian ports;
4. TalkNET (Central Europe Program - ongoing, end: April 2020) - aims to improve the coordination of Central European cargo transport operators to support multimodal

transport and the efficiency of individual nodes;

5. PortForward (Program H2020, ongoing, end: December 2021) - aims to develop the concept of "port of the future", also in the field of environmental sustainability;
6. CLEAN BERTH (Interreg Italy Slovenia, ongoing: end: February 2022) – aims to strengthen institutional cooperation between Italian and Slovenia ports on environmental sustainability and energy efficiency

However, none of these projects has linked the improvement of planning abilities to environmental sustainability and port energy efficiency and the concrete implementation of pilot actions with the commitment of the partner ports to create a common governance at the level of the Programme Area in a medium- and long-term perspective.

Therefore, in the context of build on the knowledge, SUSPORT will capitalize on some of the results of the projects mentioned above, by contacting the Lead Partners of the completed projects and especially those that will be in progress looking for stable collaborations:

1. ECOPORT 8 - SUSPORT will use the knowledge developed in terms of standards for the monitoring and control of the main environmental parameters of the ports in view of ISO 14000 certification as part of WP3.1 - Activity A.WP3. 1.2 - Study of best practices for environmental sustainability and energy efficiency of ports;
2. SIMPLA - SUSPORT will consider the guidelines for the integration of SEAP and SUMP, trying to borrow them in WP3.1 - Activities A.WP3.1.3 - Crossborder model of environmental sustainability plan and port energy efficiency;
3. SUPAIR - SUSPORT will consider the methodology developed for the preparation of sustainable port plans in the Adriatic-Ionian Area, trying to borrow them in WP3.1 - Activity A.WP3.1.3 - Cross-border model of environmental sustainability plan and energy efficiency port;
4. TalkNET - SUSPORT will use the knowledge developed in terms of pilot actions developed by some partners within WP3.1 - Activity A.WP3.1.2 - Study of best practices for environmental sustainability and energy efficiency of ports and WP3 .2 - Pilot actions for environmental sustainability and energy efficiency of the Program Area ports;
5. PortForward - SUSPORT will consider the experiences gained in terms of adopting green technologies to reduce the impact of port operations within WP3.1 - Activity A.WP3.1.2 -



Study of best practices for environmental sustainability and efficiency energy efficiency of ports;

6. CLEAN BERTH – SUSPORT will capitalise on the methodology for the action plan and learn from the implemented pilot actions In particular, synergies will be sought with similar ongoing projects (e.g. CLEAN BERTH), through exchange of best practices and cross-fertilisation activities to be agreed upon jointly.

## 6. SUSPORT POLICY RECOMMENDATIONS FOR EUSAIR

SUSPORT – according to its Project’s experience – gathers some **policy recommendations** for the EUSAIR Strategy that can sustain the strategic development process dealing with port environmental sustainability and to be presented to the EUSAIR Transport Steering Group no. 2.

With the main objective **to improve environmental sustainability and the energy efficiency in port areas**, the following policy recommendations have been identified and represent the high-level strategical heritage left by SUSPORT Project:

### **POLICY RECOMMENDATION N°1: SUPPORTING AN INTEGRATED GOVERNANCE**

There is a need to sustain an integrated governance, that enables a factual sharing of best practices, analysing the situation, and developing action plans in the field of environmental sustainability and energy efficiency, to overcome the weak coordination and communication of all stakeholders, both in increasing competences at the local level and mutual learning among ports of different countries, and joint medium and long-term planning.

### **POLICY RECOMMENDATION N°2: REDUCING GREENHOUSE GAS (GHG) EMISSIONS**

There is a need to sustain the objective of significantly reducing greenhouse gas emissions and achieving climate neutrality by introducing more ambitious policies aimed at reducing dependence on fossil fuels and in synergy with the commitment to eliminate pollution. The activities planned and included in the action plan with this objective contribute to the fight against climate change through the implementation of green interventions allowing to guide the ports towards that ecological transition that will lead them to become a zero-emission system.

Among the main initiatives regarding the related policy, the followings can be highlighted: the transition to new technologies and alternative fuels with low or zero "carbon footprint", the promotion of sustainable transport methods within the port such as a portshuttle system or hydrogen powered trucks to transfer containers in the port area, the introduction of carbon capture and storage, etc.

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### **POLICY RECOMMENDATION N°3: FOCUSING ON ENERGY EFFICIENCY & PROMOTING THE USE OF RENEWABLE ENERGY**

Great attention, nowadays, has to be paid for taking successfully energy optimization related measures aimed at improving energy efficiency and promoting the use of renewable energy in the port area. These measures are involving works, facilities, structures, and actions as a result of investments made with the aim of improving energy efficiency and produce energy from renewable sources.

Among the main initiatives regarding the related policy, the followings can be highlighted: the transition to new energy-saving lighting systems, solar panels and smart grids, electric and hybrid vehicles, the introduction of on-shore power supply (cold ironing system), photovoltaic systems, and the employment of alternative energy sources such as LNG and biomass, etc.

### **POLICY RECOMMENDATION N°4: INCENTIVE SCHEMES AND NEW RULES**

Port area management authorities have an important role to play in engaging actors in the port community to be more environmentally friendly and facilitate through initiatives the implementation of best environmental practices and the encouragement of measures aimed at improving energy efficiency and promoting the use of renewable energy in the port area. Within this overall framework of policies, which aim to increasing environmental sustainability and energy efficiency of ports through the introduction of rules, priorities, facilitations, incentive mechanisms etc., the contribution to reducing GHG emissions is potentially high.

Among the main initiatives regarding the related policy, the followings can be highlighted: incentive schemes to support port operators investing in less energy intensive facilities/equipment and/or renewable energy sources, new rules or discounts on berth fees for efficient, low CO<sub>2eq</sub> vessels, etc.

#### **6.1. General Remarks**

Indeed, the whole experience conducted within SUSPORT Project highlighted some important needs that can be considered as points of reference in the strategic definition process within national and transnational organizations:

- **Improvement of port expertise in joint planning of environmental sustainability and**

**energy efficiency, as a key condition, to ensure the basis for long-term change.** In particular, a fruitful exchange of experiences and analysis of best practices will provide staff from all ports in the area with a solid knowledge base to improve their planning skills. For sustainable development, as a fundamental determinant of today's business of different actors, and also of port authorities, implementation of an efficient environmental management system, including the so-called carbon management, is important since a range of activities, products and services associated with the operation of port authorities has a certain environmental impact and generates greenhouse gas emissions, and the latter must be avoided or at least minimised.

- **Harmonisation of policies and actions to strengthen environmental sustainability and port energy efficiency across borders.** The development of a common model environmental sustainability and energy efficiency plan will provide the basis for the standardisation of environmental protection measures.
  
- **Institutionalisation of cross-border governance of environmental sustainability and energy efficiency.** Thanks to the creation of a permanent cross-border institutional network through the signing of a Joint Protocol, all ports in the Programme Area commit to implement a common strategy on environmental sustainability and energy efficiency in a long-term perspective well beyond the end of the project.