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RENEWPORT RES toolkit for Med ports evaluation report

Deliverable D.1.3.1

Document control sheet

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Project mission	Promoting green living areas
Lead Partner	Port Network Authority of the Eastern Adriatic Sea

Work package	WP1 Developing a toolkit for renewable energy uptake in MED ports
Activity	Activity 1.3 Evaluating the RENEWPORT RES toolkit for MED ports
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Content

1. Introduction

1.1. Presentation of the Interreg Euro-Med programme

Interreg is a European Union (EU) instrument to improve cooperation between regions within the EU. It promotes regional development, cohesion, and reducing economic disparities. It takes part of the EU's Cohesion Policy and participate of the European Regional Development Fund (ERDF).

For the period 2021-2027, the fund will enable investments to make Europe and its regions:

- More competitive and smarter
- Greener, low-carbon and resilient
- More connected by enhancing mobility
- More social, supporting effective and inclusive employment, education, skills, social inclusion and equal access to healthcare
- Closer to citizens.

Interreg includes 86 programmes divided in three types:

- Cross border programmes (64 programmes)
- Transnational (13 programmes)
- Interregional (4 programmes)
- Outermost Regions (5 regions)

The transnational programmes, grouped as Interreg B, make reference to big areas of Europe. They support a wide range of project investment related to innovation, environment, accessibility, telecommunications, urban development and governance. Interreg Euro-Med makes part of this kind of programmes. It aims to make the Mediterranean region smarter and greener and improve the governance between its stakeholders. The programme includes 69 regions of 14 countries from Northern shore of the Mediterranean, from Lisbon to Cyprus. It includes 10 EU Member States and 4 countries from the Instrument for Pre-accession Assistance (IPA). Around 140 million people live in this area.

The programme has embedded the objectives into missions for a more comprehensive approach. The four missions are:

1.- Innovative sustainable economy Mission, to strength an innovative sustainable economy, to boost a fair transition to a circular economy

2.- Natural heritage Mission focused on protecting, restoring and valorising the natural environment and heritage

3.- Green living areas Mission, to improve the lives of Mediterranean citizens by promoting the development of green living areas

4.- Sustainable tourism Mission focused on fostering a circular tourism considering the sustainability of ecosystem services.

The programme provides funds for projects developed and managed by public administrations, universities, private and civil society organisations. The total programme budget amounts to almost € 300 millions for the 2021-2027 period. Six kinds of projects are foreseen in the programme:

- Thematic Community projects that aim at establishing conditions for the reuse of results, the development of synergies and the increase of coordination between thematic projects working towards the same mission by articulating a community of Interreg Euro-MED projects partners and implementing transfer and mainstreaming strategies of Euro-MED thematic projects results.
- Institutional Dialogue projects contributing to the implementation of transfer and mainstreaming strategies by engaging with local, regional and national authorities and to the implementation of transfer and mainstreaming strategies and setting up long-lasting conditions for a permanent institutional and social dialogue to bridge the transnational dimension with the local solutions.
- Study projects that perform analyses to better address a thematic issue and open the door to the development of new instruments, policies, strategies, and action plans.
- Test projects that experiment common instruments, policies, strategies and action plans already developed to validate concrete solutions to be transferred.
- Transfer projects that optimise and share validated common instruments, policies, strategies and actions plans to have the stakeholders adopt them.
- Strategic territorial projects that conduct studies, test solutions and transfer results addressing the strategic topics of a specific type of territory.

1.2. Presentation of the project

The project “Harnessing RENEWable energy potential for clean energy transition of MED PORTs – RENEWPORT” is a Test project approved under the second all of the Interreg Euro-Med programme. The main objective is to tackle the negative contribution to climate change of ports by supporting the clean energy transition of MED ports, turning them from emitters of pollutants and greenhouse gases to clean energy hubs by exploiting the untapped potential of renewable energy sources (RES). Through RENEWPORT, policy makers will be endowed with new solutions supporting them to fight climate change reaching energy goals and carbon neutrality and citizens will benefit from cleaner air, MED territories becoming greener living areas.

The project is divided in three main activities:

- The first one is the development of a toolkit that will guide MED ports in the adoption of the most suitable renewable energy source in each location, based on their own current and future energy needs. The toolkit will be freely available on the project’s website and will be replicable in other geographical contexts, even beyond the MED Area.
- The second one will consist of the testing of renewable energy options in MED ports. Each port participating in the project will implement concrete pilot activities and investments testing the use of RES in different scenarios and contexts. For the evaluation of these pilot actions, the partners jointly elaborate a set of processes, techniques models, tools, methods and services, deriving a solution answering the need of transforming ports in renewable energy hubs to be replicated in the MED area and beyond.

- At the end, the partners will upscale and transfer the project's solutions. By one side, an e-learning platform will be created containing the technical knowledge gathered in the development of the RENEWPORT RES toolkit and pilot activities and investments. By other hand, some networking activities will be organised with target groups at local, transnational and macro-regional level to inform them about the overall project's results.

The project is led by the Port Network Authority of the Eastern Adriatic Sea (Italy) and the partnership is composed of:

- Port Network Authority of the Northern Tyrrhenian Sea (Italy)
- Var Chamber of commerce and industry (France)
- Valenciaport Foundation (Spain)
- Valencia Port Authority (Spain)
- Luka Koper, port and logistic system, public limited company (Slovenia)
- Port of Rijeka Authority (Croatia)
- Port of Bar (Montenegro)
- Durres Port Authority (Albania)
- Piraeus Port Authority (Greece)

1.3. Presentation of the WP1

The first Work Package of the project is divided into 4 activities:

- Activity 1.1: Preparing the RENEWPORT RES toolkit for MED ports
- Activity 1.2: Co-developing the RENEWPORT RES toolkit for MED ports
- Activity 1.3: Evaluating the RENEWPORT RES toolkit for MED ports
- Activity 1.4: Delivering information on the RENEWPORT RES toolkit for MED ports

This deliverable is included in the Activity 1.3 of the Work Package 1 of the project and is the only deliverable of this activity. The aim of this activity is to review the results achieved by testing the RES toolkit, by comparing data and results, learning from each other's experiences, leading to adjustments of the toolkit, if needed.

2. Template Provided to Project Partners

To collect feedback on the toolkit in an organized and efficient manner, a structured template was provided to the project partners. This template was designed to gather detailed insights on various aspects of the toolkit, ensuring that the evaluation process was comprehensive and streamlined. Below is the template that was shared with the partners to facilitate the collection of their valuable feedback.

Following the Application Form of RENEWPORT project, in the Activity 1.3 we have to evaluate the RENEWPORT RES toolkit. WE would like to do a first evaluation with the first version of the toolkit in order to have a first feedback from you and try to improve the toolkit.

This evaluation is part of Deliverable D 1.3.1 of the RENEWPORT project, which focuses on assessing the effectiveness of the Toolkit for comparing wind and solar potential in port areas. According to

the project framework, this evaluation follows a common methodology and aims to provide a structured review of the Toolkit's usability and performance.

Please, complete the table below and try to answer the following questions. Please fill in the right column with a score between 1 and 5, with 1 meaning that you do not agree with the statement and 5 meaning that you strongly agree with the statement.

1	The Toolkit is easy to navigate.	
2	The data visualization is clear and informative.	
3	The Toolkit provides accurate and relevant comparisons.	
4	The instructions are clear and easy to follow.	
5	The Toolkit is useful for decision-making in port operations.	
6	It is easy to input and modify data.	
7	The user interface is visually appealing.	
8	The tool's results align with your expectations.	
9	The information provided by the Toolkit is the desired one.	

Now, please, try to answer to the questions in order to have good information to improve the toolkit.

1. **What aspects of the Toolkit did you find most useful?** *Your answer:*
2. **What challenges or difficulties did you encounter while using the Toolkit?** *Your answer:*
3. **How could we make the Toolkit more intuitive?** *Your answer:*
4. **Does the Toolkit provide the information you expected? Would you make any modifications?** *Your answer:*
5. **Do you have any additional suggestions for improvement?** *Your answer:*

Thank you for taking the time to provide feedback on our Toolkit for comparing wind and solar potential in port areas. Your insights are crucial in improving its usability and effectiveness. Your responses will help us refine the tool and ensure it meets the needs of users like you.

We appreciate your valuable input!

3. Responses from Project Partners

As part of Activity 1.3 of the RENEWPORT project, and in line with Deliverable D1.3.1, we conducted an initial evaluation of the RENEWPORT RES Toolkit. The aim of this evaluation is to gather structured feedback from project partners based on the first version of the toolkit, in order to assess its usability, performance, and overall effectiveness in comparing wind and solar potential in port areas.

3.1. Evaluation form

To achieve this, all project partners were invited to complete a standardized evaluation form. Each partner was asked to rate a series of statements related to different aspects of the Toolkit—such as ease of use, clarity of data visualization, and usefulness for decision-making—on a scale from 1 to 5, with 1 meaning that the respondent does not agree with the statement, and 5 meaning that they strongly agree.

The following table summarizes the average scores provided by the five partner organizations who submitted their feedback.

1	The Toolkit is easy to navigate.	4,8
2	The data visualization is clear and informative.	5
3	The Toolkit provides accurate and relevant comparisons.	4
4	The instructions are clear and easy to follow.	4,8
5	The Toolkit is useful for decision-making in port operations.	4,4
6	It is easy to input and modify data.	4,6
7	The user interface is visually appealing.	4,8
8	The tool's results align with your expectations.	4,4
9	The information provided by the Toolkit is the desired one.	4,2

3.2. Open ended Questions

In addition to the numerical evaluation, we asked project partners to answer five open-ended questions in order to gather more detailed and qualitative feedback about their experience using the RENEWPORT RES Toolkit. The aim was to identify the most valuable features, detect any challenges, and explore potential improvements from a user perspective.

What aspects of the Toolkit did you find most useful?

- The reporting feature and data on solar production were widely praised for their clarity and usefulness.
- Several partners appreciated the technical databases (e.g., solar panels, wind turbines) and how easily they can be applied.
- The user-friendly and intuitive interface was highlighted as a major strength.
- Easy navigation and simplicity were key elements appreciated by all.

What challenges or difficulties did you encounter while using the Toolkit?

- Minor bugs or limitations were mentioned, such as:
    - Difficulty modifying installation areas after setting the first point.
    - Drawing or editing objects (e.g., solar areas or studies) lacked flexibility.
    - Some users needed administrator help to activate certain locations.
- Wind turbine height limitation (min. 70m) was noted as restrictive by two partners.
- One user found it initially complicated to create their port area, but the issue was resolved.

How could we make the Toolkit more intuitive?

- Better zoom and map controls, including drag-and-drop, copy/paste, and rotation features.
- Allow entry of coordinates and surface area in square meters.
- Enable direct port selection from a list, not just manual input.

- Some partners said the tool is already highly intuitive and did not suggest changes.

Does the Toolkit provide the information you expected? Would you make any modifications?

- Most agreed that the Toolkit meets expectations.
- Suggestions for improvement:
  - Include small-scale wind turbines (lower than 70m).
  - Add the option to reverse scenarios (e.g., input desired energy to calculate solar surface needed).
  - Include features to navigate more easily between pages (e.g., back button on report page).

Do you have any additional suggestions for improvement?

- Add a “wiki” or help section to explain technical terms like “Pitch” and “Stall”.
- Allow more detailed study comparison (e.g., port name, location info).
- Consider adding new energy sources, such as hydrogen fuel cells or wave energy.
- Improve dark mode readability.
- Implement sorting and auto-updating lists of equipment (e.g., alphabetical order for solar panels).
- Consider including real-world case studies or best practices to inspire users.

4. Conclusions

Most of the suggestions and recommendations collected through this feedback process have been discussed with the development team and successfully integrated into the current version of the Toolkit. However, due to certain technical and budgetary limitations, some proposals have been noted as potential improvements for future development phases.

Overall, the feedback has been very positive. The RENEWPORT RES Toolkit is seen as a valuable and effective tool for assessing the renewable energy potential—particularly solar and wind—in port areas. We consider the development of the Toolkit a great success within the project, both in terms of functionality and relevance for end users.