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ACTIVITY 1.4

REPORT OF REGIONAL WORKSHOP (Split-Dalmatia County, City of Trogir)

On the basis of the scenarios produced with the A1.2 and the assessment of the A1.3, this activity aims to raise awareness of the relevant institutions in charge of territorial policy making and of the social and economic stakeholders on data about water use and water saving practices, to support its concrete conceptual consideration in institutional and sectoral policies and implementation through concrete practices. This is made possible through the organisation of ad-hoc Regional Workshops in each targeted area, with the contribution of each partner.

DATE: April 29, 2025

TIME/DURATION: 10:00 – 13:00 (3 h)

PLACE: City of Trogir, City Hall (Pope John Paul II Square)

NUMBER OF PARTICIPANTS: 22

REPRESENTED SECTORS/ORGANISATIONS:

1. Ivica Šitum – RERA SD
2. Duško Radulović – Sensum d.o.o.
3. Zrinka Vrčec – Sensum d.o.o.
4. Andrea Makjanić – Sensum d.o.o.
5. Katarina Banić RERA SD
6. Ante Guć – RERA SD
7. Marijana Vuković – Zeleni servis
8. Ana Plepel – Zeleni servis d.o.o.
9. Smiljana Blažević – Zeleni servis d.o.o.
10. Nikša Hrabar – Environmental association Eko Žedno
11. Tanja Ivanović – RERA SD
12. Tonči Agić – City of Trogir
13. Aleksanda Bilić Petričević – Trogir City Museum
14. Željana Rozić – Chamber of handicraft in Trogir
15. Jakša Geić – Secondary school Ivana Lucića – Trogir
16. Jasna Popović – Ministry of Culture and Media of the Republic of Croatia
17. Ivana Bilić – Elementary school Petar Bersilavić – Trogir
18. Matea Harošić – Trogir Tourist Board
19. Nikolina Tomaš – Trogir Holding d.o.o.
20. Ivana Parčina – Split-Dalmatia County
21. Dujo Odžak – City of Trogir
22. Patricija Pavlov – City of Trogir



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SHORT SUMMARY OF THE EVENT

The presentation session examined climate risks facing the City of Trogir through three ways (deliverables for three different project activities so far): policy analysis, stakeholder input, and climate projections. The session combined scientific climate projections from CMCC platform and city characteristic to highlight key sectors for the City of Trogir and their disadvantages that are projected to be exacerbated by climate events. These sectors are **water system** because of the rising pressure on the system simultaneously as the water source is projected to be on a long-run discharge decrease, and **public health** because of the dangerous impacts arising from increasing heat stress on vulnerable populations (elderly, children, and tourists that are mainly elder people or families with children). Key outcomes included calls for infrastructure modernization, green space expansion, and nature-based solutions, with emphasis on learning from both successful and problematic adaptation cases.

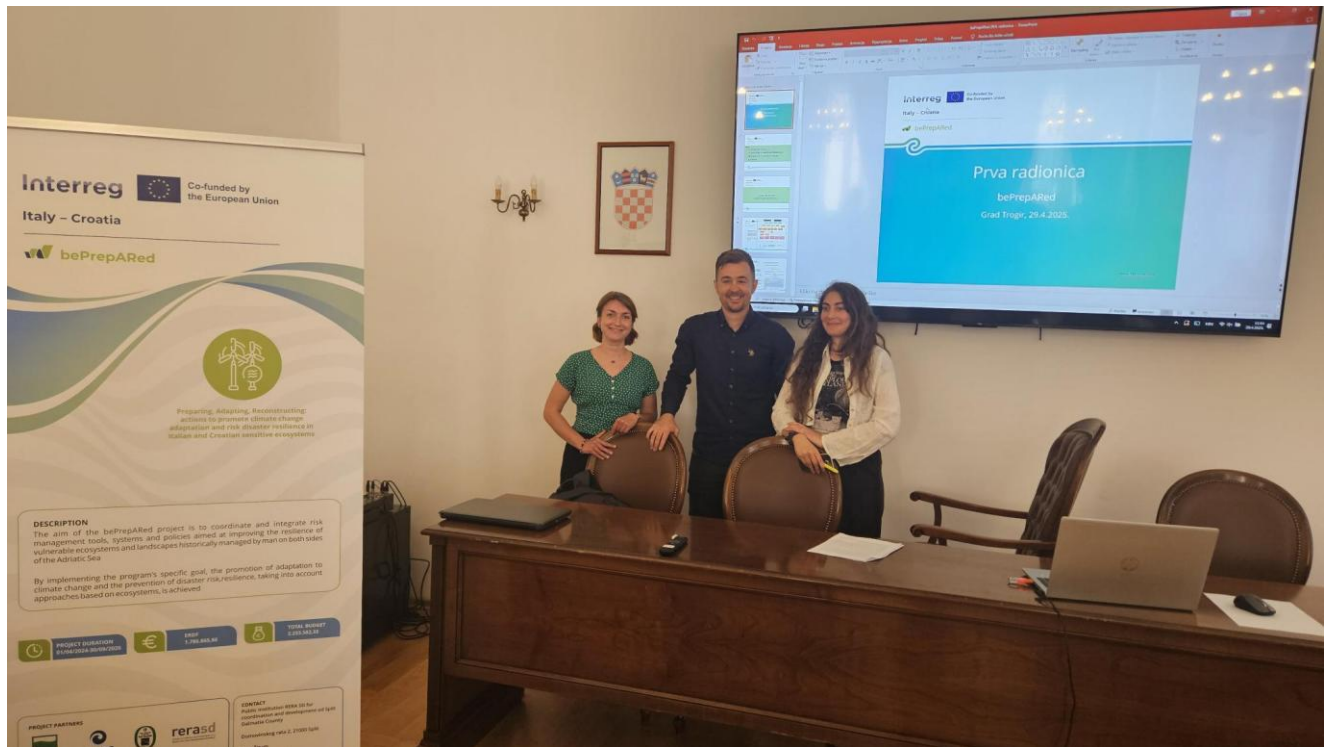
Workshop activities engaged participants in prioritizing risks and solutions, using tools like the **Eisenhower matrix to evaluate the most important and the most urgent needs**. **Participants prioritized a tourism sector** because of its high strategic importance to Trogir, and the **cultural heritage** as it is not adequately represented and is also of high importance to the city. Final discussion led to conclusions that both sectors are mutually linked, and that one can influence the other both positively and negatively.

DETAILED REPORT

- **WELCOME AND INTRODUCTION**

Ivica Šitum (representative of the Public Institution RERA S.D. for the coordination and development of Split-Dalmatia County), as the working group leader for the City of Trogir – a project partner – opened the meeting and presented the key details about the project and its objectives. Subsequently, **Duško Radulović, the activity implementer on behalf of the Sensum d.o.o.**, introduced the company and two colleagues, **Zrinka Vrčec and Andrea Makjanić**, who were responsible for developing the strategy as part of the project activity A1.2 that was main result to present in this workshop. From then on, Zrinka Vrčec and Andrea Makjanić took on to lead a plenary session and workshop activities.





Zrinka Vrčec (Sensum), Ivica Šitum (RERA) and Andrea Makjanić (Sensum)



During the plenary session

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BePrepARed

- **PLENARY SESSION**

The plenary session consisted of three thematic segments, presented through three chapters within a one-hour presentation.

The first segment provided **an overview of key climate change documents** at the European Union, national (Croatia), regional (Split-Dalmatia County), and local (City of Trogir) levels. The review was based on Project **Activity A1.1 and Deliverable 1.1 "Report on solutions in policies/tools for water landscapes management"**. For each level, the most relevant sections within the presented documents were highlighted. For example, in the *European Climate Risk Assessment* (EU level), highlighted chapter analysed cause-and-effect relationships between climate extreme events and vulnerable sectors. This was important as the point of the project is to connect climate extreme events with relevant sectors. The objective was to demonstrate how the impact of climate hazards can be accelerated and/or intensified by non-climate drivers, predominantly of anthropogenic origin. Furthermore, the analysis showed how consequences of extreme weather events in one sector can create cascading negative effects on other sectors, either directly or indirectly. When a particular emphasis was placed on the analysis of climate change impacts on olive cultivation (as a key component of The Program for Mitigating Climate Change, Adapting to Climate Change, and Protecting the Ozone Layer of the Split-Dalmatia County), given the widespread olive farming in the City of Trogir area, sparked a discussion among the participants about other equally important agricultural crops in the region.

The second part of the presentation **showcased the results of a project's questionnaire**, that some of the workshop participants did complete. As presented in **Deliverable 1.3 "Reports mapping the relevant local stakeholders' needs" as part of Project Activity 1.3**, the results were visually presented and analysed. The findings demonstrated that the way on which the water resources are managed was important not only for residential consumption and infrastructure but also for natural ecosystems. Furthermore, the questionnaire revealed the influence of subjective perception and personal experience on assessments of climate change impacts, which can lead to underestimation of other negative effects. Analysis of answers regarding the nature-based solutions sparked the discussion, particular emphasis was placed on the need to develop green spaces in the City of Trogir.

The third part of the presentation focused on the **key contents and conclusions of the Deliverable 1.2 - Strategy "Climate scenarios report for the City of Trogir" as part of Project Activity 1.2**. The Strategy included climate indicator projections for the period 2036-2065 for the area of the City of Trogir, **generated through the CMCC platform**, and an in-depth study of the City of Trogir. This analysis aimed to identify the city's strategic sectors, enabling precise determination of the most significant climate risks and their potential impact on vulnerable sectors within the city. First, the CMCC platform was introduced, accompanied by a simple diagram illustrating the selection process for identifying the most precise and relevant climate indicators from approximately thirty available ones on the platform. Subsequently, the presentation showed an analysis of the City of Trogir based on key characteristics including population size and primary economic activities. The analysis revealed that Trogir's eight settlements can be grouped into three distinct clusters sharing similar characteristics. This classification enabled **the identification of the most vulnerable sectors - water supply system and public health**. These two sectors were then analysed in greater detail, examining both current conditions and identified deficiencies. The interpretation of climate indicator values served as the basis for a



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symbolic representation comparing historical baseline data (1981-2010 averages) with future climate projections (2036-2065) from RCP4.5 scenario (as it is the most likely) for the City of Trogir, visually highlighting the climatic differences between two periods.

The final assessment of climate hazards' impact on the city's most vulnerable sectors involved examining projected climate issues and their effects on water supply and public health systems. For example, the projected increase in tropical nights from approximately 47 to 72 days will result in prolonged periods of extreme heat danger for vulnerable populations. The inability of the human body to cool down adequately at night after daytime heat exposure leads to significant heat stress, especially among people with cardiovascular problems which is common. The analysis identified vulnerable groups including elderly residents (in one settlement cluster), children (in another cluster), and tourists (in a third cluster), particularly since Trogir primarily attracts older visitors and families with children. The healthcare system faces pressure due to increasingly warmer and longer heat periods, seasonal tourism demands, and the fact that many healthcare workers themselves fall within vulnerable age groups, potentially compromising the system's resilience during critical periods.

The last part sparked a wide discussion among workshop participants. In view of the worn-out water pipe system and the future state of the river Jadro spring, participants shared their complementary opinions regarding the need to modernize water pipelines. Some of these participants were themselves involved in projects regarding water pipeline monitoring or making a video of the river Jadro state. There was also a comment on the need to further analyze the mentioned vulnerable sectors, but also the need to include other sectors – as biodiversity and cultural heritage. During the analysis of public health system and projected climate state, the participants were very involved in the discussion about urban heat islands. This sparked a discussion of various mitigation strategies, from white-painted building facades to heat-reflective blue pavement solutions like those implemented in Dubai. The discussion also extensively covered green infrastructure, citing negative cases like the overuse of concrete and installation of synthetic playground materials in a Croatian protected natural area, as well as exemplary models such as a Spanish school that collaboratively manages an educational garden with its students.

The discussion among the participants was a great introduction to the last theme of Project Activity 1.2 - **the green infrastructure of the City of Trogir, namely the public parks.** All the five public parks are located either on the mainland in the settlement Trogir or in the historic centre of Trogir. An important characteristic of public green spaces is that they should be as densely covered by tree canopies as possible, to provide visitors with a pleasant microclimate and, most importantly, shade during hot summer days. **Canopy coverage varied across the five parks.** Park Garagnin Fanfogna resembled a small forest, while those in the historic center were fragmented green spaces intersected by walking paths. Friendship Park, however, lacked sufficient shading – a particular issue given its location next to the public beach, which had no canopy cover at all. **A significant issue was identified in other settlements, which lacked public green spaces entirely, including beaches without adequate natural shading.**

The emphasis on the fact that **public green spaces are beneficial in many aspects** was given: providing shade during summer days, preventing the formation of urban heat islands (UHI), enhancing the city's aesthetic appeal, offering a safe and pleasant environment—especially for the elderly and families with children, acting



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as retention areas for urban flooding, and serving as hotspots for urban biodiversity. There are also **indirect benefits** as reduced electricity usage for cooling the indoor spaces, thanks to the availability of comfortable outdoor spaces for residents and tourists. This not only decreases the city's total energy consumption but also alleviates pressure on households vulnerable to energy poverty. Additionally, mitigating urban heat islands helps lower health risks and eases the burden on healthcare systems by reducing both daytime and nighttime air temperatures.

- **WORKING GROUP ACTIVITIES – INITIAL SESSION, ACTIVITY 1, ACTIVITY 2**

Following the presentation of the project's current results, participants divided into two groups and were guided through the steps of the workshop. Both activities lasted around 1 h and 30 minutes.

Activity 1 consisted of two phases: individual reflection on local priorities and vulnerabilities, followed by a group discussion about what is the most important. Individual reflection was prompted by the group facilitator that gave guidance by posing insightful questions. **Each group then identified a key focus area – Group 1 prioritized a tourism sector because of its high strategic importance to Trogir, while Group 2 prioritized the cultural heritage as it is not adequately represented.** Following sector selection, participants identified climate hazards and non-climatic drivers affecting the sector, then mapped their compound impacts. This analysis exposed multidimensional vulnerabilities arising from intersecting climatic and non-climatic pressures.

Activity 2 consisted of categorizing these negative causes (multidimensional vulnerabilities) using the Eisenhower Matrix, evaluating both the importance and the urgency in resolving the issues that arise from these negative causes.

- **PANEL DISCUSSION AND WORKING GROUP CONCLUSION**

Each group presented the importance and vulnerabilities of their chosen sector. The final discussion led to conclusions that the two sectors are mutually linked and can influence each other both positively and negatively. This means that hazards negatively affecting the cultural heritage sector may also harm the tourism sector, and vice versa.



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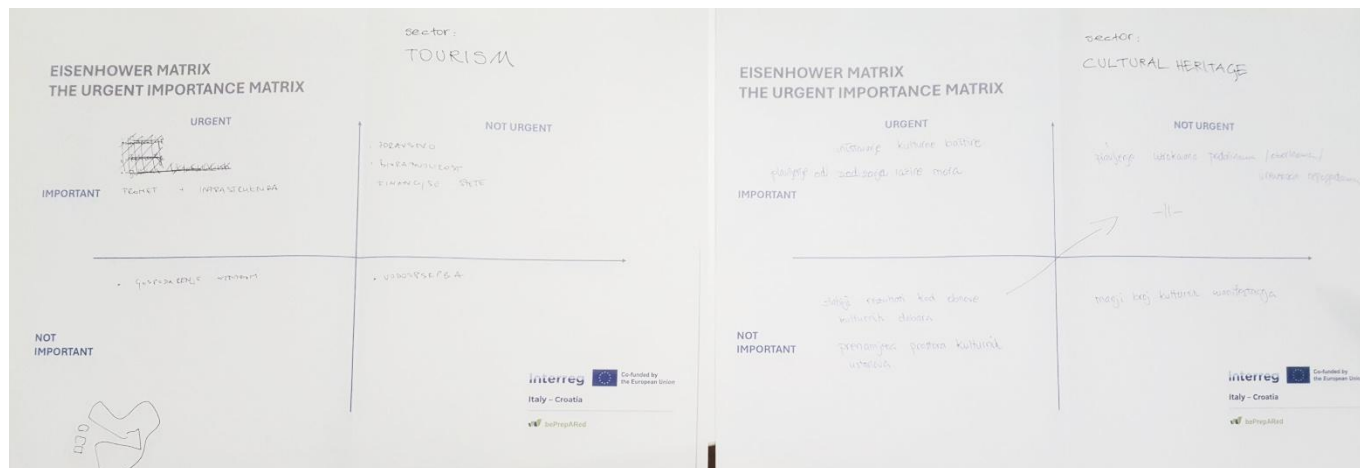
Group 1 (sector: tourism) led by Zrinka V.



Group 2 (sector: cultural heritage) led by Andrea M.



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Eisenhower matrices for tourism (left) and cultural heritage (right)

