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ADRIADAPT Newsletter - Issue no. 7

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ADRIADAPT – A Resilience information platform for Adriatic cities and towns started officially on January 1st 2019, and unites technicians, policy makers, planners and scientists from Italy and Croatia in their efforts for creating a knowledge base for cities and towns in adapting to climate change. Supporting cities in creating good and sustainable strategies, building resilience and preparing for climate change is increasingly important also for cities and towns in the Adriatic area; climate change impacts are

becoming progressively concrete with more extreme weather events as well as with slow onset impacts on the population, habitats in and around cities and in consequence, on local economies.

Cities and towns, as concentrations of cultural, social and economic activities along the Adriatic coasts, need to prepare for coastal and river flooding, coastal erosion and subsidence in order to maintain and enhance their ability to support livelihoods, local and regional economies and infrastructures. Further challenges for the Adriatic coastal areas are connected to freshwater availability under threat by the salinization of aquifers and fires related to droughts and heat waves.

One of the main outputs of the ADRIADAPT project is an Italian-Croatian <u>adaptation</u> <u>platform</u> – a tool to support municipalities in both countries in developing adaptation plans or progressing their ongoing work on climate change adaptation.

ADRIADAPT project partners

Expert partners:

Local partners:

- <u>Fondazione Centro Euro-</u>
 <u>Mediterraneo sui Cambiamenti</u>
 <u>Climatici (CMCC)</u>
- <u>Agenzia regionale per la</u> <u>prevenzione, l'ambiente e l</u> <u>'energia dell'Emilia-Romagna</u> <u>(ARPAE)</u>
- <u>Universita luav di</u>
 <u>Venezia (IUAV)</u>
- <u>Centar za regionalne aktivnosti</u> <u>Programa prioritetnih akcija</u> (<u>PAP/RAC</u>)

- <u>Unione Dei Comuni Valle Del</u>
 <u>Savio</u>
- Comune di Cervia
- Comune di Udine
- Šibensko-kninska županija
- Grad Vodice

Communication partners:

 <u>Društvo za oblikovanje</u> održivog razvoja (DOOR) <u>Državni hidrometeorološki</u> <u>zavod (DHMZ)</u>

ADRIADAPT Project Closure



Cities on the Adriatic coast at the forefront of climate change impacts

Coastal and river floods, coastal erosion, subsidence, salinization of aquifers, droughts, heat waves: the Adriatic coast is getting ready for the impacts of climate change with new and updated adaptation

plans based on scientific evidence. On June 8, 2021, at the conference "Knowledge for Local Resilience", the Italian-Croatian Adriadapt project coordinated by the CMCC Foundation launched a multilingual adaptation platform that offers solutions for dealing with the predicted impacts of climate change on the area, and presents the adaptation plans adopted by Italian and Croatian cities.

30 months of work, 11 organisations, 5 local authorities, 2 countries, 1 challenge: support the cities of the Adriatic coast in adapting to climate change, and increase the resilience of the region to the impacts expected in the coming decades. On June 8, 2021, the collaboration between Italian and Croatian research centers, institutions and local authorities coordinated by the <u>CMCC Foundation -</u> <u>Euro-Mediterranean Centre on Climate Change</u>, resulted in the "<u>Knowledge for Local Resilience</u>" conference, wrapping up the two-year <u>Interreg Italy-Croatia project Adriadapt</u>.

The project has two main outcomes. The first is **the development and updating of climate change adaptation plans by the local authorities** involved - the Union of the Municipalities of the Savio Valley, the cities of Udine and Cervia, in Italy; the county of Šibenik-Knin and the city of Vodice, in Croatia - which have thus positioned themselves as pioneering cities and regions on the European scene. The second is a <u>multilingual web platform</u>, which will now act as a support tool for any municipality in the Adriatic region wishing to align with the objectives set by the new <u>European Climate</u> <u>Change Adaptation Strategy</u>, which calls for the adoption of adaptation strategies at all geographical levels, based on the most up-to-date scientific evidence.

Climate scenarios for the Adriatic region

Expected impacts of climate change in the Adriatic coastal areas include increasingly extreme weather events, rising sea levels that may undermine the availability of freshwater for humans and for the environment due to groundwater salinization, and the increase of fires related to droughts and heat waves. Coastal cities in the area, where cultural, social, recreational, tourist and economic activities are concentrated, have to get ready for coastal and river flooding, coastal erosion and subsidence to manage and limit these impacts, which will affect the population, cities, infrastructure and local economies.

Local authorities often lack the expertise needed to take concrete action or do not have access to the available knowledge. This is why the Adriadapt project has networked scientific partners and local administrations, creating a model to support cities and regions in planning sound and sustainable

adaptation strategies based on the results of scientific research.

"Much of the knowledge available to date is focused on Northern Europe, and hardly applicable to the needs of the Mediterranean," explains <u>Margaretha Breil</u>, scientist at the CMCC Foundation and project coordinator." In order to guide the cities of the Adriatic coast in targeted actions tailored to actual local needs, the project has produced detailed and high-resolution climate scenarios describing the expected climate in the region for the next decades and up to the end of the century, and provided specific climate indicators for each area involved." The scenarios were developed by the CMCC together with <u>ARPAE (Agenzia Regionale per la Prevenzione, l'Ambiente e l'Energia dell'Emilia-Romagna</u>), the <u>Croatian Meteorological and Hydrological Service (DHMZ</u>) and the <u>IUAV University of Venice</u>, responsible for vulnerability analyses.

"An important strength of Adriadapt was the partnership that led it: a close collaboration between scientific partners and local partners from Italy and Croatia with the common aim of providing cities in the Adriatic area with knowledge and tools to adapt to climate change," says Breil. "The scientific partners worked closely with local partners - practitioners, policy-makers, planners - to respond to the concrete needs of the end-users of the knowledge produced in research centers. We worked as much as possible in local languages, testing this knowledge with our local partners in the construction of their plans."

Local adaptation plans

Five successful case studies emerge from the work performed.

The **Union of the Municipalities of the Savio Valley** includes six municipalities of the Emilia Romagna region, in an area characterized by a high naturalistic value crossed by the Savio river, that connects the entire territory to the coast. The area is vulnerable to climate change, especially due to the hydro-geological instability linked to the increase in extreme precipitation. "Thanks to the Adriadapt project and the knowledge exchange with the partners, the Savio Valley Union has had a chance to experiment a new model of territorial governance to address, above all, the issue of climate change no longer as a challenge or a problem, but first of all as an important opportunity for territorial development," said Roberto Zoffoli, strategic planning and European projects manager at the municipality of Cesena. "The final output was the definition and approval of the Sustainable Energy and Climate Action Plan (SECAP), that addresses all of 2030 with a series of strategic actions for energy

transition and adaptation. Concrete applications on the territory will continue even after the end of Adriadapt. They concern the development of actions to counteract hydro-geological instability, including strategies for forest and agricultural management of the mountain territory and greening actions, together with the creation of urban forests to enhance ecological corridors both in the Cesena area and along the entire territory of the Savio Valley. This will allow us to fight heat waves and improve the quality of life of our citizens."

The main vulnerabilities of the city of **Cervia** have been identified in the increasing urban heat waves - which are expected to negatively affect tourism in a city that hosts up to 3 million tourists in the summer season -, sea level rise and salt intrusion. "The Adriadapt project has been an exceptional opportunity for the municipality of Cervia to deepen the issues related to the vulnerability of the territory to climate change," said **Daniele Capitani**, head of the planning and management of the territory department of the municipality of Cervia. "For us, this project will mean updating the Sustainable Energy and Climate Action Plan, which is the backbone of the strategic-structural planning of the authority in question, which adopted it in 2017-2018 together with a General Urban Plan, adapting to all the regulations and sensitivities that put the environment first with respect to the development of the territory."

"The municipality of **Udine** has also taken part in this challenge, concentrating on two studies: that of the system of urban water channels - therefore on the conservative state of our water resources - and the study of the areas of the city prone to flooding and subject to storms, which as we all know are increasingly intense and brief," says **Giulia Manzan**, councillor for spatial planning, European projects and participation of the municipality of Udine. "The municipality of Udine has focused on the Sustainable Energy and Climate Action Plan through a multimedia platform where all citizens can contribute. In fact, it intends to continue pursuing the objectives of the Adriadapt project and involve more and more areas (with a focus on the surrounding municipalities, stakeholders and citizens) and to collect more information on this very topical issue."

In the case of **Vodice**, a city of 10,000 inhabitants on the Croatian coast that sees a lot of tourism, urban heat islands and flooding were identified as the main vulnerabilities. To address such vulnerabilities, the city plan foresees actions related to the integration of multi-functional green spaces in the urban area and flood management technologies.

Šibenik-Knin County includes 5 towns and 15 municipalities. The vulnerability of the region was identified in the concentration of activities and cultural heritage spots along the coast, and in the

interdependence between the increasingly urbanized coastal environment and the marine environment: runoff from intense rainfall and coastal inundation from storm surges represent risks for the urban areas, but can also carry contaminants to the sea, negatively impacting not only marine ecosystems, but also tourism and fisheries. The region's adaptation plan, completed in 2015, and winner of the <u>Mediterranean Climate Change Adaptation Award</u> in 2019, was updated during the project thanks to an analysis of the state of coastal infrastructure to improve risk management.

The new AdriAdapt platform

Alongside the success of local case studies, one of the main outcomes of the project is the <u>Italian-Croatian adaptation platform AdriAdapt</u>, a tool to support municipalities in both countries in developing adaptation plans or progressing their ongoing work on climate change adaptation. Published in three languages - English, Italian and Croatian - AdriAdapt aims to be an adaptation platform specifically for the Adriatic area, offering solutions to address predicted impacts on this area, and acting as a guiding tool for planning and implementing resilience and adaptation plans. By browsing the platform, local administrators and planners in the Adriatic coastal area will be able to learn about the challenges and impacts expected for their area, explore case studies and good practices to be used as examples to respond to these challenges, identify practically applicable and scalable technologies and strategies, and find guidelines to manage the processes leading to drafting and implementation of adaptation plans. The platform was designed by the project partner <u>DOOR</u> - responsible for the communication activities of the project - and developed by <u>PAP/RAC</u> (Priority Actions Programme/Regional Activity Centre), who took care of its contents.

The legacy of the Adriadapt project

At the final conference of Adriadapt, partners have discussed how to ensure that the knowledge produced can fuel continuous and lasting improvement in the resilience of Adriatic cities to climate change. Breil said: "The data and knowledge produced, including the regional and local climate projections, are an important basis for creating the conditions for new cities to work on their climate change adaptation plan. Alongside the multilingual platform, which will remain available over time, we would like to see permanent structures established to support municipalities in designing their adaptation plans. The Croatian authorities are already thinking about this and we hope that the trend will also take hold in Italy."

For more information:

The multilingual platform AdriAdapt: adriadapt.eu

The videos illustrating the various case studies and their adaptation plans:

- Union of the Municipalities of the Savio Valley (Italy)
- <u>Cervia</u> (Italy)
- <u>Udine</u> (Italy)
- <u>Vodice</u> (Croatia)
- <u>Šibenik-Knin County</u> (Croatia)

Visit Adriadapt's YouTube channel for more content: <u>https://www.youtube.com/channel/UCtSnttksTOy4K7ueS5LVeCg/videos</u>

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