CLIMATE LITERACY

Interreg
Italy - Croatia
AdriaClim
European Regional Development Fund

EUROPEAN UNION

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WHAT IS CLIMATE LITERACY?

Making informed decisions

A **climate literate person** is a critical thinker who understands complex relationships of multiple variables of the climate system and acts in the best interest of long-term global health. Climate literacy is the goal of climate and environmental education that teaches individuals how to consider a wide range of factors in their daily lives to make informed decisions on how best to interact with the world around them in a sustainable and environmentally friendly manner.

The intention behind climate literacy and introducing climate-based education and dissemination is to inform about the importance of making responsible and thoughtful decisions while considering the total environmental impact.

Climate education is cross-cutting by nature, meaning it encompasses many topics like math, civics, economics and history. Similarly, all aspects of our daily lives are connected to climate – from the food we eat to the way we travel to work, to the products we buy.
The interconnectedness of the systems involved in climate change amplifies the need for environmental and climate education to include the arts, English, economics and history. Individuals connect to the environment in different ways depending on their own individual identities based on how they live, where they were raised, and what fields of study they choose for their careers.

A climate literate person knows the dispositions (how to respond), competencies (skills and abilities of how and when), and environmentally responsible behaviour to address climate change.

A climate-literate person understands the essential principles of Earth's climate system, knows how to assess scientifically credible climate information, communicates about climate change in a meaningful way, and can make informed and responsible decisions regarding actions that may affect climate.

THE ADRIACLIM APPROACH

1

A cross-border cooperation project

AdriaClim is the acronym of the research project funded by the Italy-Croatia Interreg Cooperation Programme that is dedicated to supporting the development of science-based regional and local climate change adaptation plans.

2

Ideate Solutions

AdriaClim will address climate change threats by developing regional and local adaptation plans based on up-to-date meteorological and oceanographical information acquired through newly implemented observing and modelling systems for the Adriatic Sea.

3

Why

The coastal and marine areas of the Adriatic Sea are particularly vulnerable to the effects of climate change. According to the "Piano Nazionale di Adattamento ai Cambiamenti Climatici (PNACC)" the Adriatic Sea is expected to undergo significant climate change in the next 30 years.

4

OUTPUTS

In Italy and Croatia climate monitoring, modelling and adaptation are necessary to face adverse climate chnage effects (or impacts) and to turn potential threats into economic opportunities

CLIMATE LITERACY IS NOT SOLELY FOR EDUCATORS.

It's a process that all citizens can be part of.

01.

THE ADRIATIC COOPERATION

The goal of Adriaclim is to increase the capacity to develop new and update existing plans for adaptation to climate change in the Adriatic. Strategies to mitigate its effects on coastal and marine areas at risk will be developed. Capacities and cooperation on climate change monitoring and modeling system will be improved, and an advanced information system, tools and indicators for optimal climate change adaptation planning will be developed.

02.

WHAT IS THE PROBLEM?

The Adriatic coastal and marine areas are particularly vulnerable to the effect of climate change. By 2050, the Adriatic sea is supposed to experience major climate change, such as the **temperature** is expected to increase by about +1,5 / 1,6 C; the **sea level** in the Adriatic sea is expected to increase by 7 cm possibly leading to **coastal erosion** with increasing temperature and volume, the **salinity** of the Adriatic sea is supposed to increase
Freshwater salinization and coastal erosion are possible **adverse effects** on the marine ecosystem are inevitable.

03.

WHAT OUTPUTS WILL WE HAVE?

In Italy and Croatia climate monitoring, modelling and adaptation are necessary to face adverse climate change effects (or impacts) and to turn potential threats into economic opportunities.
AdriaClim will develop accurate information able to support the development of regional and local climate change adaptation plans; plan a coastal adjustment, for a sustainable blue economy, based on reliable and accurate information; contribute to filling the gaps in existing modelling capacity by developing high-resolution integrated models.

9 STORIES

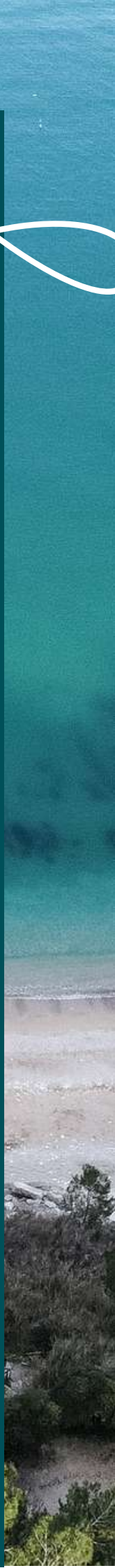
STORYTELLING

The Adriatic sea is at a crossroads. People living on its coast and beyond share the most notable marine and coastal Mediterranean habitats that provide valuable ecosystem services. On both sides climate monitoring, modelling and adaptation are necessary to face adverse climate change effects and to turn potential threats into opportunities.

To increase the capacity to develop new and update existing plans for adaptation to climate change in the Adriatic advanced information system, tools and indicators are developed.

To engage audiences' attention and involvement, language must be simple, narrative, and appealing. These stories are notably born within science thanks to the contribution and cooperation of an interdisciplinary team who breaks the imaginary boundary between the narrator and the reader. Words, voices, and images are stepping stones in the construction of our innovative climate adaptation stories, built to increase climate awareness and knowledge, grounded in frontier science research and forged with cutting-edge technological tools. Mixing the power of storytelling and new media possibilities, an innovative form of science communication is defined by visual stories that are effective and powerful tool to convey specific information to a diverse public.

Nested within the climate literacy platform, climate adaptation stories are the core for cross pollination and contamination of the exchange of information to showcase best climate adaptation in the Adriatic sea, to facilitate the uptake of the knowledge and the coordination among different cultural sectors and governance levels, and to mobilise collective and individual actions for climate change adaptation.



WHERE THE RIVER MEETS THE SEA

Neretva - Dubrovnik

A protected wetland where the Neretva River meets the Adriatic Sea and man reaps the fruits of the earth and the sea.

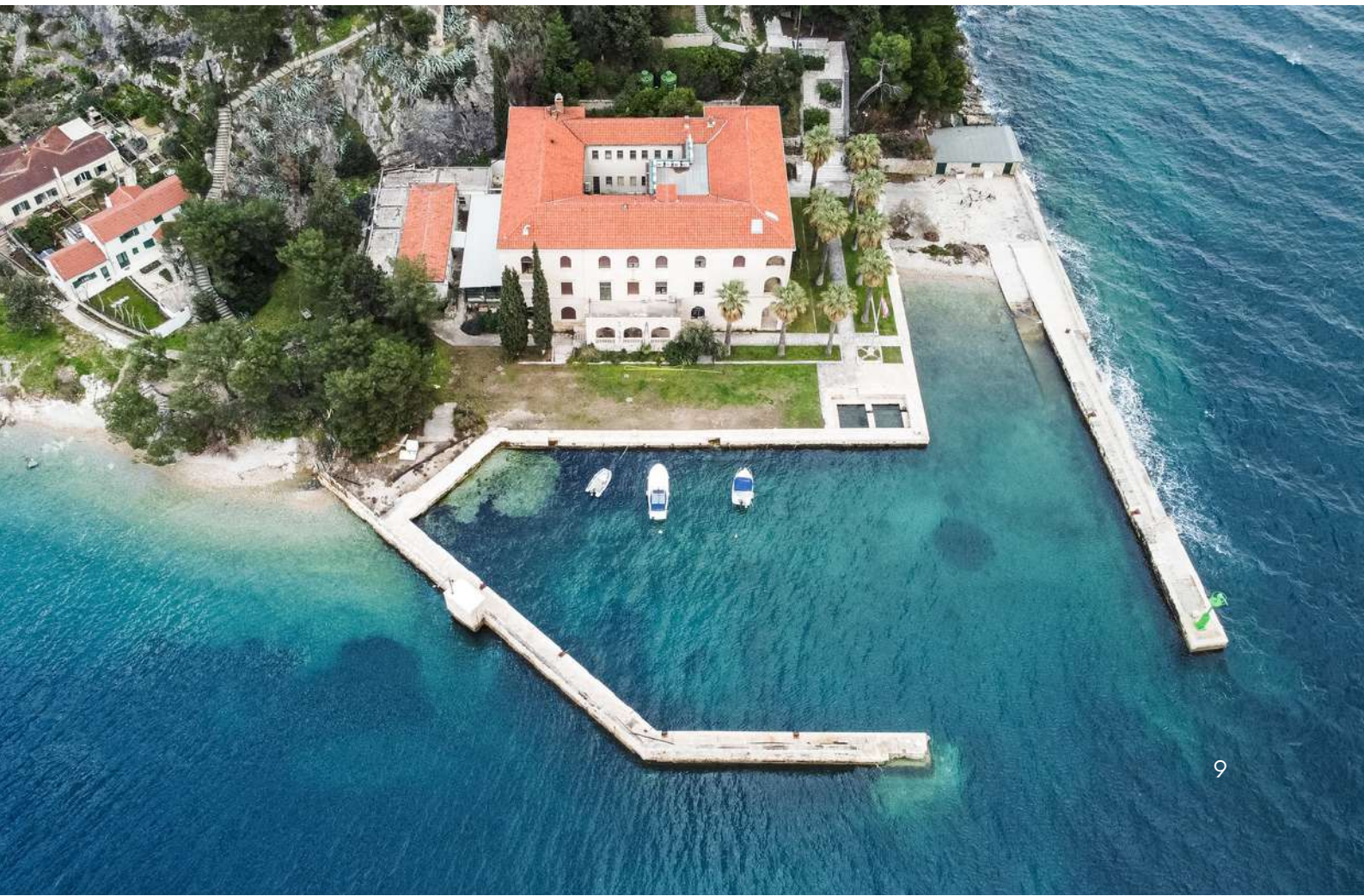
A thousand-year harmony attested by its natural history. The current speed of climate change causes a break in the balance of the coastal marine environment: today the sea enters the river delta, causing salinization. Biodiversity is at risk along with agriculture, the primary source of livelihood of the local communities. Monitoring these changes is critically important for the future of reed-nesting bird communities, numerous fish species, and crops.

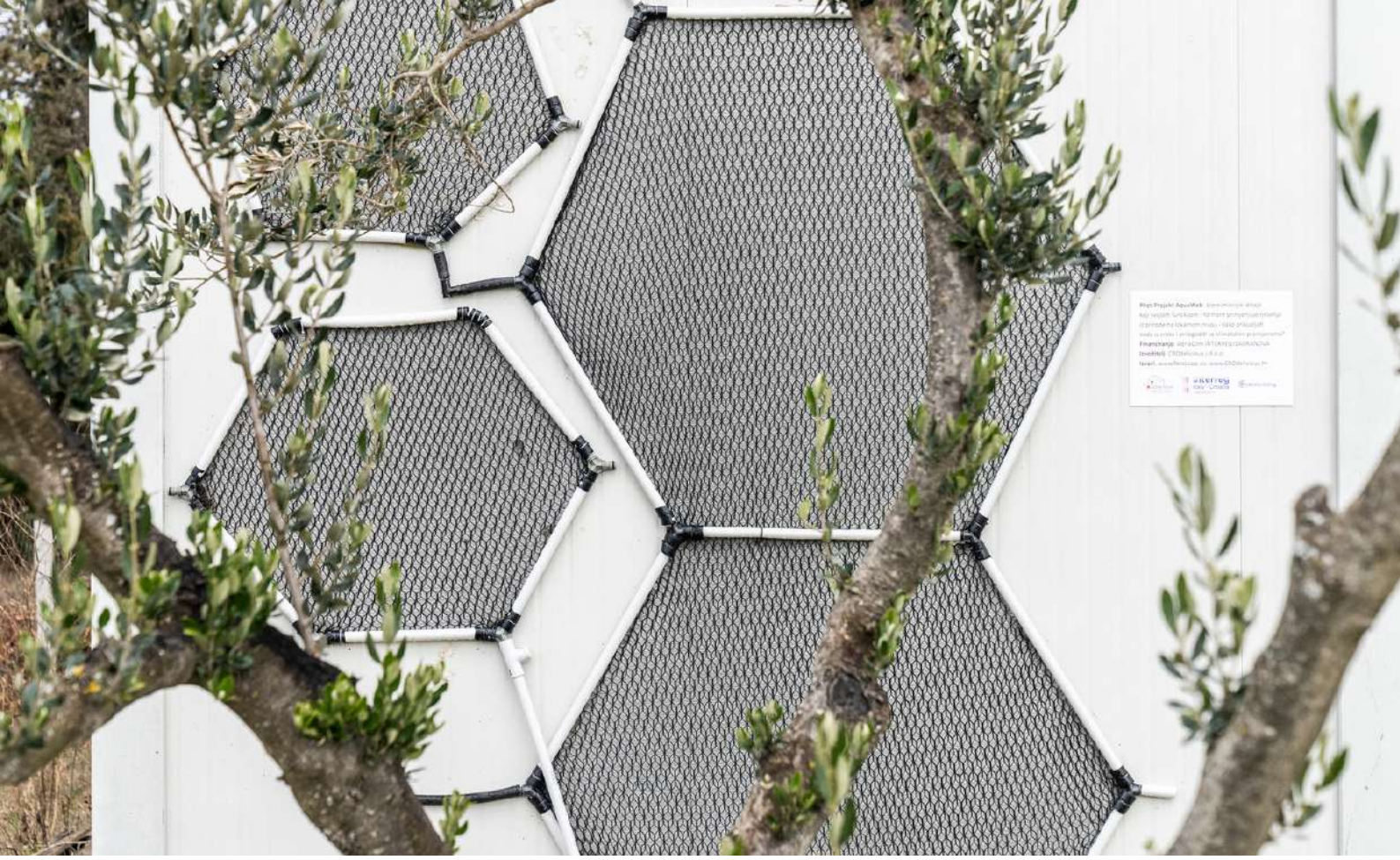
In the Kaštela Bay, the study of coastal ecosystems is intertwined with history.

Decades of data are collected in the library of the Institute of Oceanography and Fisheries in Split, where different disciplines work together to monitor the evolution of coastal environments over time. Generations of researchers follow in an effort to expand knowledge related to human impacts on these delicate ecosystems with the help of new technologies.

A JOURNEY THROUGH THE HISTORY OF OCEANOGRAPHY

Split





THE SPIDER WEB THAT BEATS DROUGHT

Zadar

In the rural areas of Zadar County, summer temperatures reach alarming levels and rainfall is becoming almost nonexistent.

The region is located in central Dalmatia, along the Middle Adriatic, and is one of those areas in Croatia that, due to the scarcity of rainfall, are often hit by very intense drought. The scarcity of water, especially in the rural areas, often makes it complex or even impossible to irrigate fields, and sometimes even to provide access to drinking water to residents.

ANCIENT KNOWLEDGE AND NEW LANGUAGES

Friuli-Venezia Giulia

How changes through the centuries inform the management of archaeological heritage today.

The archaeological site of Aquileia provides an insight into the millennia-long evolution of the town, a valuable narrative to understand how ancient civilizations have transformed along with their surrounding environment. Current climate changes are forcing the managing agency to adapt to increasingly rapid shifts that cause extreme phenomena.

ARTIFICIAL INTELLIGENCE FOR COASTAL ADAPTATION

Veneto

We are at the Venice-Lido beach, where a light bora wind is blowing and the steady rhythm of the waves is broken by that–more piercing and less pleasant–of the renovation works of the Excelsior hotel.

The part of the island nearest to the waterbus stops is the most densely built and inhabited. If we go further east, however, the buildings thin out and nature begins to prevail. First, we find the area of Malamocco: one of the oldest Venetian settlements, dating back to Roman times and still inhabited by just over a thousand people.

CO-DESIGN AND PARTICIPATION FOR INCLUSIVE ADAPTATION

Emilia-Romagna

One of the most popular shores in Italy, but also a residential area rich in biodiversity. The Emilia-Romagna coast has been facing changes for several years already.

The coast of the Emilia-Romagna region stretches for about 130 km, with a population of about 500,000 residents. However, this number nearly doubles during the summer season. Beyond touristic infrastructures, the coast also includes 34,000 hectares of natural protected areas. In recent decades, the coast has seen an increase in its vulnerability to sea level rise and storm surges.

ONE COAST, MANY SOLUTIONS

Marche

How to choose appropriate solutions to coastal erosion in different areas? Along the Marche coast, topographic surveys help experts decide which interventions are the most effective.

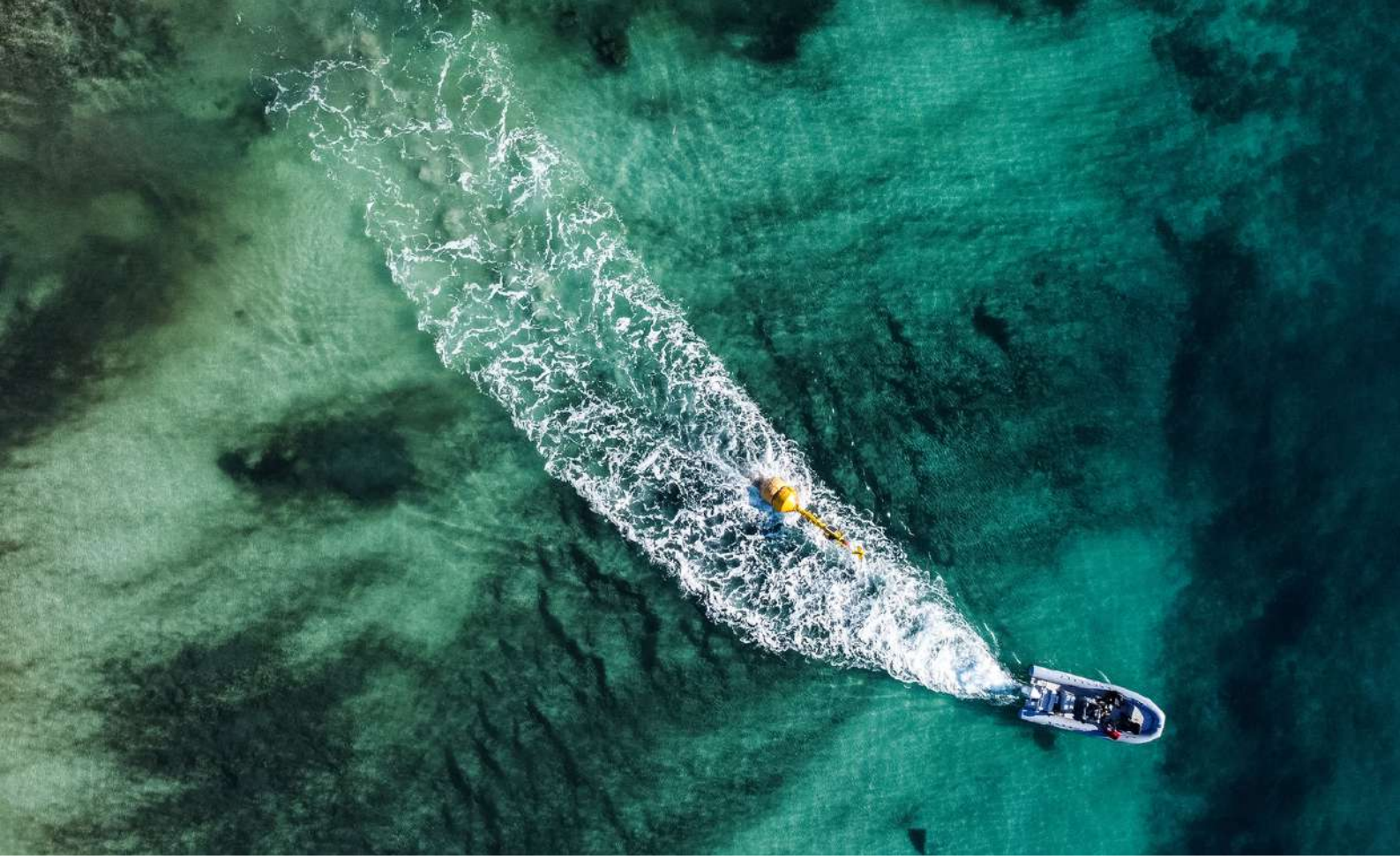
Here we are on the bank of the Esino River; we will then head to Marina di Montemarciano and then down to Porto Sant'Elpidio, passing by the incredible "artificial" beach of San Michele in Sirolo. A journey from the river to the sea to discover the delicate balance between these two natural elements.

FOLLOWING THE FLAMES

Molise

New weather-marine conditions and an organizational gap increase the likelihood of fires on the Molise coast.

A call comes into the operations room: the Campomarino pine forest is on fire. In 2021, a mega-fire spreads between the beach and the industrial area in the coastal area between Molise and Puglia. These phenomena are more frequent as temperatures rise. The wind carries the sparks hundreds of meters away, where land abandonment and poor management skills leave the forest in the grip of flames. Today, the Civil Protection is experimenting with new monitoring tools, trying to learn from past events to promote prevention and adaptation.

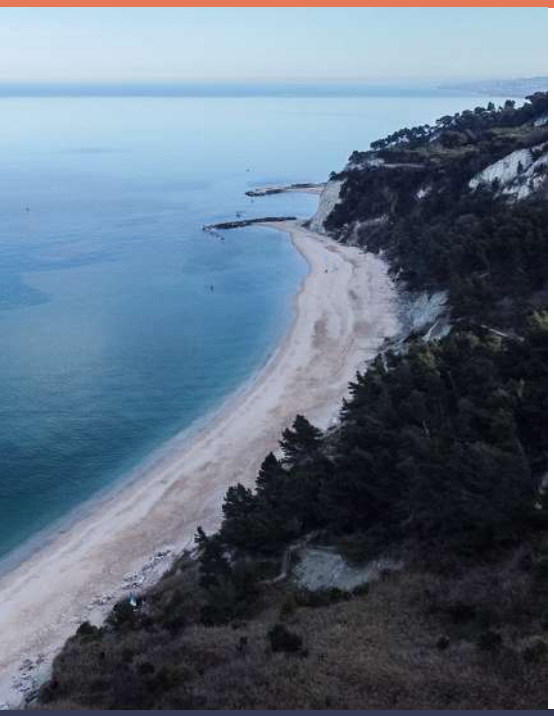


SENTINELS OF CHANGE

Puglia

Off the coast a system of buoys collects data for adaptation.

The Apulian Adriatic coast presents a heterogeneous shoreline; sheer cliffs alternate with sandy shorelines. Standing out among others is the promontory of Torre Guaceto, characterized by dunes rich in biodiversity and unique coastal ecosystems protected under a marine reserve bearing the same name. We reach the shores to meet Viviana Piermattei, oceanographer at the Euro-Mediterranean Center on Climate Change.



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This booklet will not be printed!

This booklet has the purpose of collecting the main outcomes of our journey across the Adriatic. The best practices of adaptation implemented in this unique and diverse area are reunited in this tool, which will be accessible to all the visitors of climateliteracy.eu and downloadable freely.

Please, consider the environment before printing this booklet!