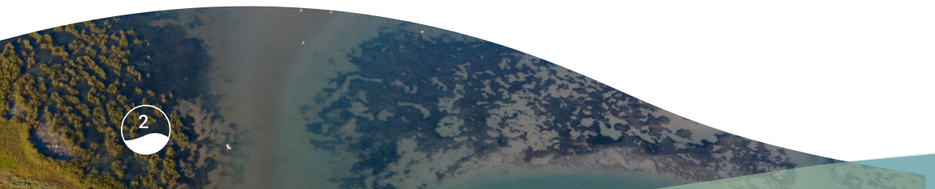
FOURTH ANNUAL BULLETIN

With the contribution of the LIFE Programme of the European Union

ADAPTA BLUES

INDEX

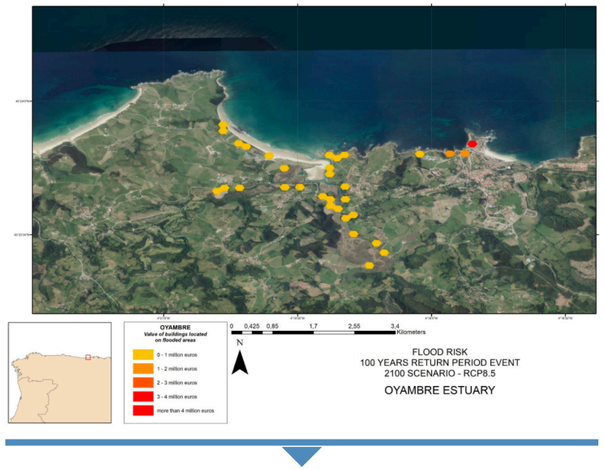


PREPARATORY ACTIONS

All the preparatory actions have been complete

They main outcomes of these preparatory actions **are published at the project website,** on which there are information about, among others:

- The values of coastal protection services provided by estuarine vegetated habitats.
- An inventory of carbon deposits and sequestration rates in representative vegetated estuarine communities
- Inundation maps of different European estuaries: Oyambre, Santander Bay, Santoña marshes and Huelva (Spain); Tagus and Mondego (Portugal); and Seine (France).
- A Geo-viewer for the visualization of all the geographical information compiled by the project.



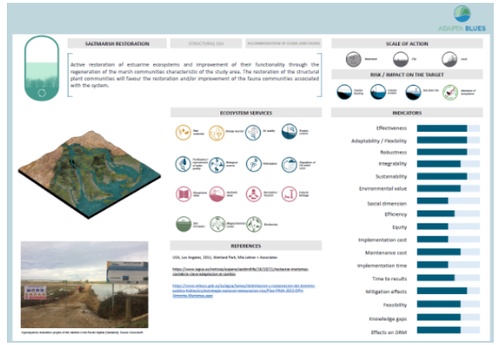
Oyambre estuary (Spain). Flood risk for built capital. 100 years return period event, 2100 RCP8.5 scenario

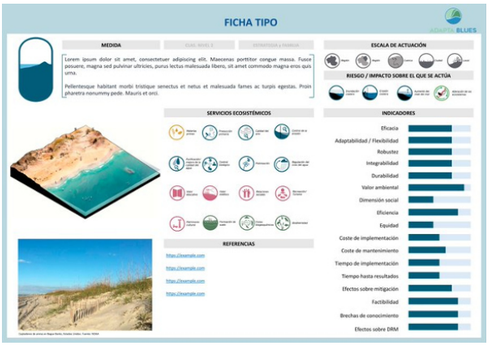
IMPLEMENTATION ACTIONS

Technical Recommendations: Definition of Climate Change adaptation and mitigation pathways in Cantabria, Coimbra and Zeeland

After a first step identifying the stakeholders involved in coastal zone management in Coimbra, Cantabria and Zeeland, a co-creation methodology has been developed for the elaboration of the **Technical Recommendations for the adaptation and mitigation of climate change in the estuaries of these regions.**

To facilitate this co-creation process, a catalog of adaptation measures (grey infrastructures, nature-based solutions, hybrid actions and management measures) has been drawn up. This catalog is available at the project website.





During this fall, technical workshops will be addressed to the local, regional and national stakeholders in each region of study in order to design the **technical recommendations through a participatory approach to facilitate their engagement.**

Enhance saltmarsh restoration in the Mondego estuary as a climate change adaptation strategy

The estuarine restoration actions in the Mondego estuary began by the construction of wooden barriers aiming the reduction of the ebbing velocity in the pilot site.

Construction works in the Mondego estuary

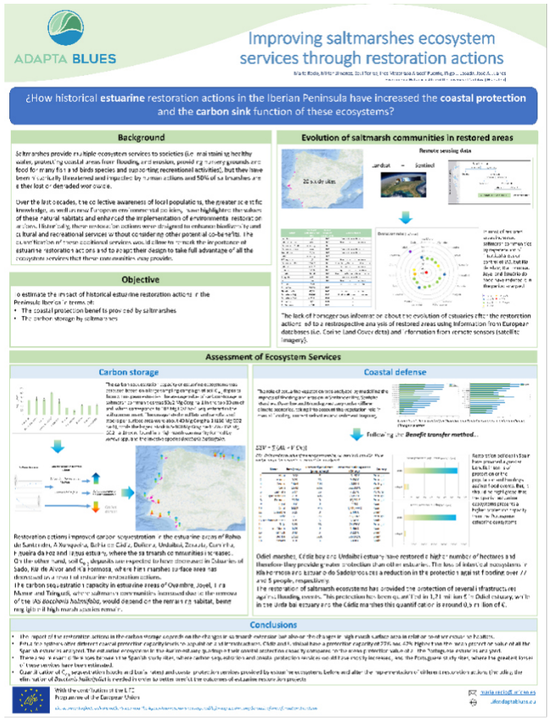
The saltmarsh transplantation concluded its 1st phase with ***Spartina maritima***. Next Fall/Winter we will transplant ***Bolboschaenus maritimus*** and ***Juncus*** to conclude salt marsh restoration action.

Wooden barrier for sediment retention

Transplantations of Spartina maritima

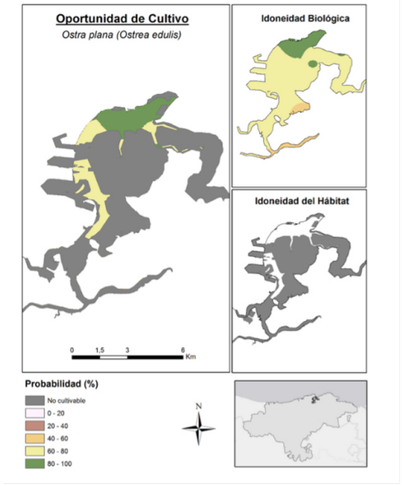
Between September 2023 and April 2024 is planned to develop three restoration activities with students contributing to the restoration action by planting native species.

Capitalization of experiences of coastal ecosystem restoration projects and link to market-based approach

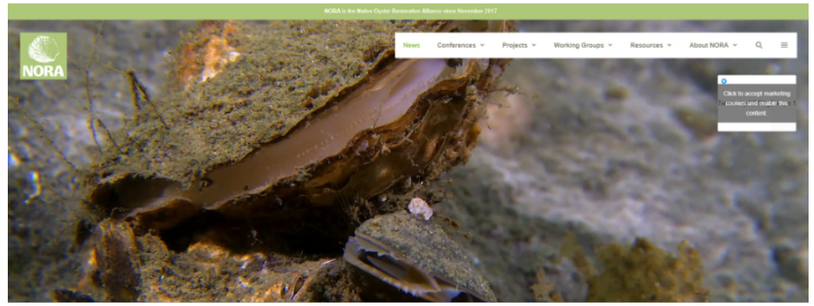


Scientific poster developed for the ECSA Conference

This action concluded by the presentation of the **analysis of How the past saltmarsh restoration actions in the Iberian Peninsula** increased the protection in coastal areas at the ECSA59 International Conference (San Sebastian, September 2022



Analysis of the opportunity of oyster (Ostrea edulis) cultivation in the Bay of Santander.



NORA website

As a summary of this action, the project LIFE AdaptaBlues has tried to widespread the value of the oyster reef restoration actions to the European stakeholders by contributing to the **Native Oyster Restoration Alliance (NORA)** in Europe. On the other hand, the project carried out a review of all the estuarine restoration actions developed at the Iberian Peninsula during the last 20 year, by trying to highlight the adaptation and mitigation co-benefits derived from these actions.

Exploring the feasibility of development of an innovative coastal flood insured based on the capacity of estuarine ecosystems to reduce total cost of flood risk

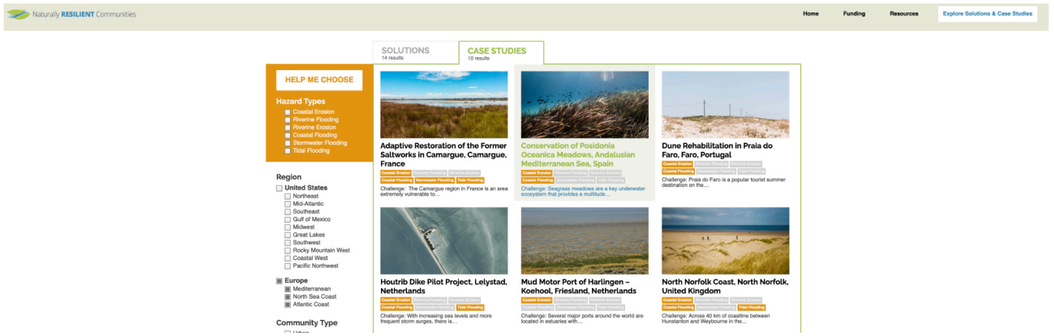
An analysis of the benefits of estuarine habitats to reduce flooding and erosion risks in EU estuaries (Huelva, Tagus and Seine estuaries) has been carried out.

DISSEMINATION ACTIONS

Creating an online platform of Nature-based solutions in Europe

An online platform to share experiences and increase the body of knowledge on Nature-based Solutions has been created.

This platform aims to help communities learn more and identify which nature-based solutions might work for them. The platform integrates basic information about the Nature-based solutions (hazard mitigation, threats and co-benefits) but also includes case studies of successful projects from across the US and Europe.



Platform Naturally RESILIENT Communities

Specialist Diploma on Ecosystem-based approaches to Climate Change Adaptation in estuarine ecosystems

The Specialist Diploma on Ecosystem-based approaches to Climate Change Adaptation in estuarine ecosystems has been launch.

The first edition of three online courses have been launched by the continuing education platform of IHCantabria (Moodle ECCE-IH). These courses integrate information about:

- **MOOC1:** Climate Change Services Provided by Estuaries and Estuarine Ecosystems and Quantification Tools
- **MOOC2:** Climate Change Risk in Coastal Areas and Estuarine-based Adaptation Strategies
- **MOOC3:** Financial Tools to Support Estuaries Restoration and Conservation Projects

Online courses training programme

To complete the training programme, an in-class teaching course will be offer to the students who complete the online training.

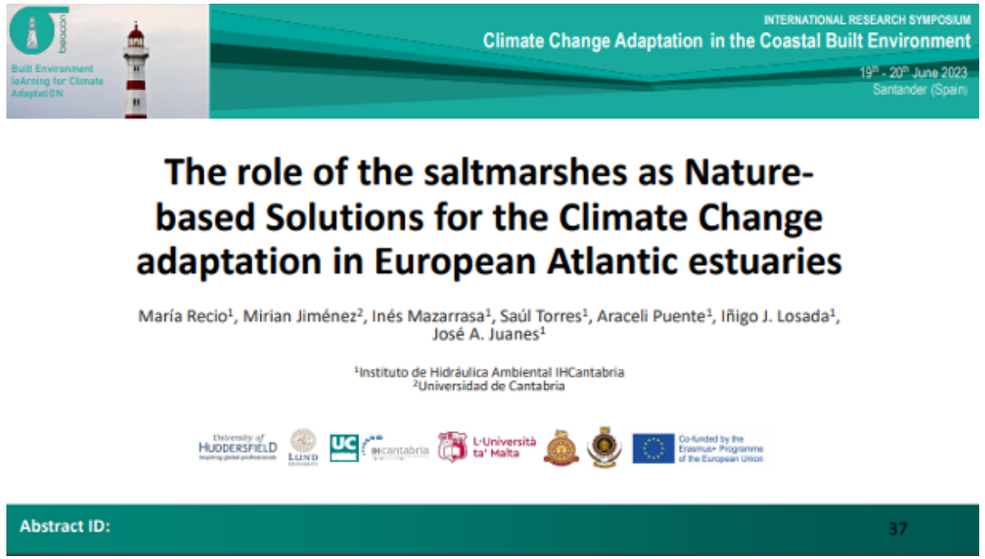
Networking

During this year, the LIFE AdaptaBlues project has increased its contact network by the development of different meetings with the Ministry of Science, Technology and Environment of Cuba (Santander 2022), in order to test the replicability of the AdaptaBlues proposals within its Climate change and disaster risk reduction program.

Meeting with the Ministry of Science of Cuba

Field visit to the study site of Oyambre

Moreover, the LIFE AdaptaBlues team had the opportunity to interact with researchers from the University of Padova (Italy) to exchange experiences on nature-based solutions.



Presentation of the work "The role of the saltmarshes as Nature-based Solutions for the Climate Change adaptation in European Atlantic estuaries"

The project has also participated in the International Research Symposium "Climate Change Adaptation in the Coastal Built Environment" organized by the BEACON Erasmus+ project by the presentation of the work "The role of the saltmarshes as Nature-based Solutions for the Climate Change adaptation in European Atlantic estuaries"

Raising Social awareness about climate change effects and nature-based solutions

ADAPTA BLUES - Second Contest
Adaptation to Climate Change in estuarine environments

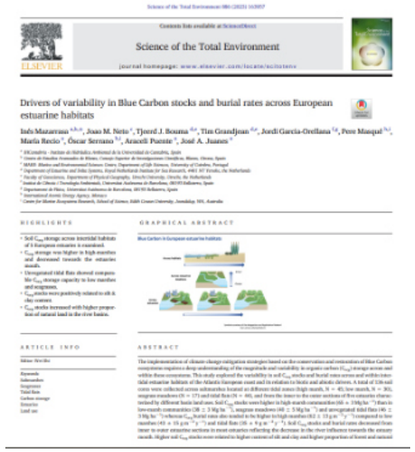
Two public contests have been launched to enhance social awareness about the climate change risks and the different measures to tackle this phenomenon.

A high school contest was organized during the school year 2021-2022 and a postgraduate contest was launched during the school year 2022-23. The postgraduate contest was settled during this summer.

Other dissemination actions

Different scientific paper has been published during this last year. All these scientific contributions are available at the project website.

Researchers of the LIFE AdaptaBlues project published a new paper about the Drivers of variability in soil Corg deposits and burial rates in European estuarine ecosystems, which could be defined as key aspects to develop management strategies for climate change mitigation in Europe.


Science of the Total Environment

journal homepage: www.elsevier.com/locate/scitotenv

Drivers of variability in Blue Carbon stocks and burial rates across European estuarine habitats

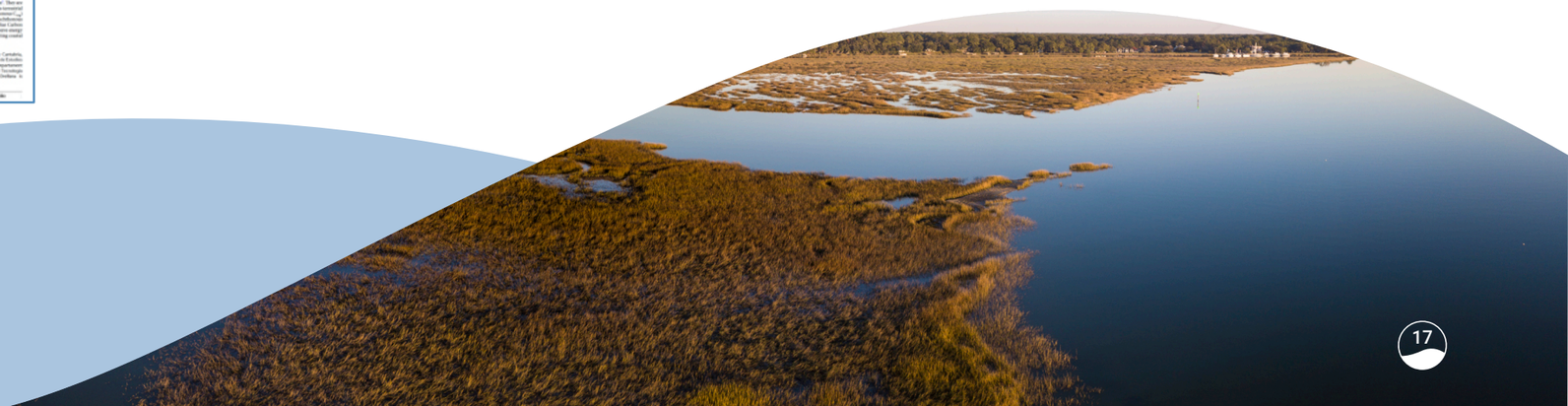

scientific reports

OPEN Coastal engineering infrastructure impacts Blue Carbon habitats distribution and ecosystem functions

On the other hand, based on the data of the AdaptaBlues Life project, another paper contributed to increase the knowledge on the impact that the construction in coastal areas of civil engineering infrastructures can cause in intertidal habitats distribution and the ecological functions they provide for climate change adaption and mitigation.

Disclaimer

This document reflects only the author's view and the European Union (European Climate, Infrastructure and Environment Executive Agency /European Commission) is not responsible for any use that may be made of the information it contains



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