



EUROPEAN UNION



EU MISSIONS

RESTORE OUR OCEAN AND WATERS



MISSION CHARTER

ThinkInAzul: environment and farming

ThinkInAzul is a joint strategy for research and innovation in marine science in Spain co-funded by Spanish government (Next Generation Funds) and by 7 regions in Spain: Murcia, Andalusia, Cantabria, Valencia, Galicia, Balearic and Canary Islands.

The main objective is to create a network of centers of excellence to cooperatively address the challenges of marine research, aquaculture, new technologies, impacts on the marine environment and the blue economy.

To this end, working on three main lines of action: (1) Marine and coastal environment observation and ecosystem monitoring; (2) Sustainable, intelligent and precision aquaculture; (3) Blue Economy: Innovation and Opportunities.





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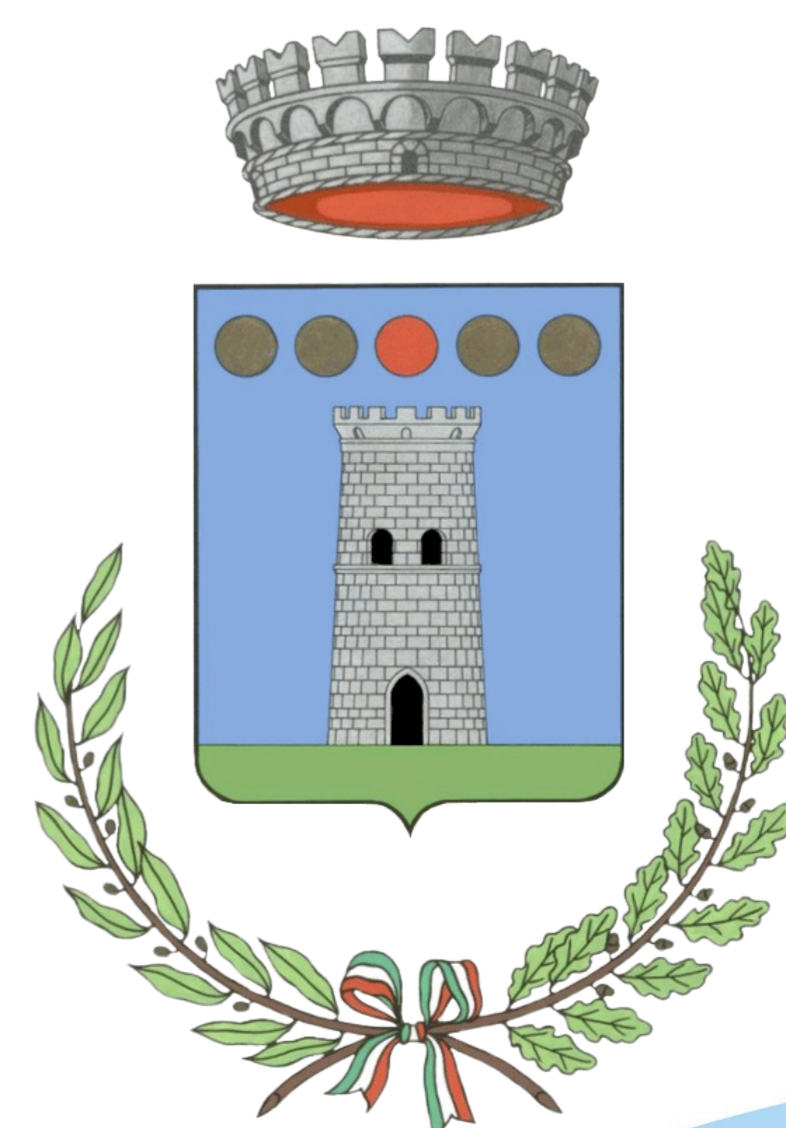
MISSION CHARTER

Isola delle Femmine harbour - Seabed restoration of the AMP

The action consist to seabed restoration of the marine protected area, removal and re-use of the ghost nets.

The place of this action is the Mediterranean Sea. The objective is recover the ghost nets and transform they in clothes, souvenirs or squares.

The impacts are: make the sustainable blue economy circular and increase the public mobilization and engagement.





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RIVER FLOWS IN EU

The River Cleaning Project and its team have the ambitious goal to restore oceans by reducing pollution at its main roots: major rivers, tributaries and channelized waterways.

From the most populated cities to national parks, everyone should be given the possibility to enjoy clean waters and a healthy environment.

Starting from our HE Project "REMEDIES" we will deploy our smart, modular and energy-free River Cleaning barriers to retain 95% of floating macro and meso litter in strategic areas with efficiency and versatility.



river cleaning



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The Baltic Sea Region- home for innovative and sustainable solutions

Policy Area Transport is a project based Cooperation Governance platform:

- promoting sustainable and eco-friendly maritime transport;
- Engaging stakeholders who are keen to develop innovative and high-tech solutions.

We achieve our objectives via:

- projects financed by EU, joint- initiatives or other activities;
- active communication and knowledge sharing with opinion leaders and policy makers.

You can find more about us at:

www.balticsea-region-strategy.eu/pa-transport-about



POLICY AREA 'TRANSPORT'

EUSBSR
EU STRATEGY
FOR THE BALTIC
SEA REGION

Interreg
Baltic Sea Region



Co-funded by
the European Union



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CONVERT PLASTIC WASTE INTO SENSORS

- The key objective of this action is to prepare new nanomaterials for sensing using non-recyclable PET waste collected in coastal regions of Portugal.
- PET bottles from the oceans are currently not recyclable and constitute an environmental problem. However, by hydrolysis it is possible to extract the terephthalic acid from these bottles and convert it into high-performance sensors to detect and capture environmental contaminants.
- Our main contribution focuses on research, teaching and development of outreach activities involving pupils at schools to collect PET waste from coastal beaches. This action also intends to promote solutions for upcycling/converting waste into innovative products.



LAQV
requimte
LABORATÓRIO ASSOCIADO
PARA A QUÍMICA VERDE



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Hiking expedition around the Baltic Sea

The aim of the expedition is to send a message to the public about the problems of marine pollution and the solutions on how each one of us can do our part to reduce marine pollution and leave the sea cleaner for future generations. The expedition will bring together scientists, ecologists, public figures, and environmental NGOs from all countries around Baltic Sea.

- The duration of the expedition is 1 year
- The planned distance is 7000 km
- The start of the expedition is 2024



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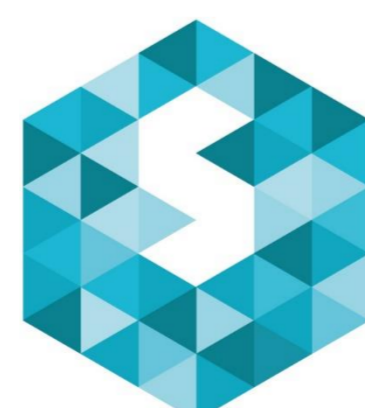
A biodegradable fibre as polyester replacement for textiles

- Polyester fibres are **#1** contributor to the microplastic pollution of our oceans
- Senbis will develop a biodegradable drop-in alternative to polyester fibres that is **scalable to millions of tons**
- The new fibre can be revolutionary as it will be **designed to meet all technical requirements** of the (fashion) textile industry
- **Current biopolymers on the market are not suitable** as they are either not scalable or do not meet the biodegradation or performance requirements for textiles
- Senbis is currently **collaborating with the RUG and TNO** and looking for financing to further upscale research

SEN
Sustainable Products

Providing Sustainable Polymer Solutions

Monofilament



SEN BIS
POLYMER INNOVATIONS



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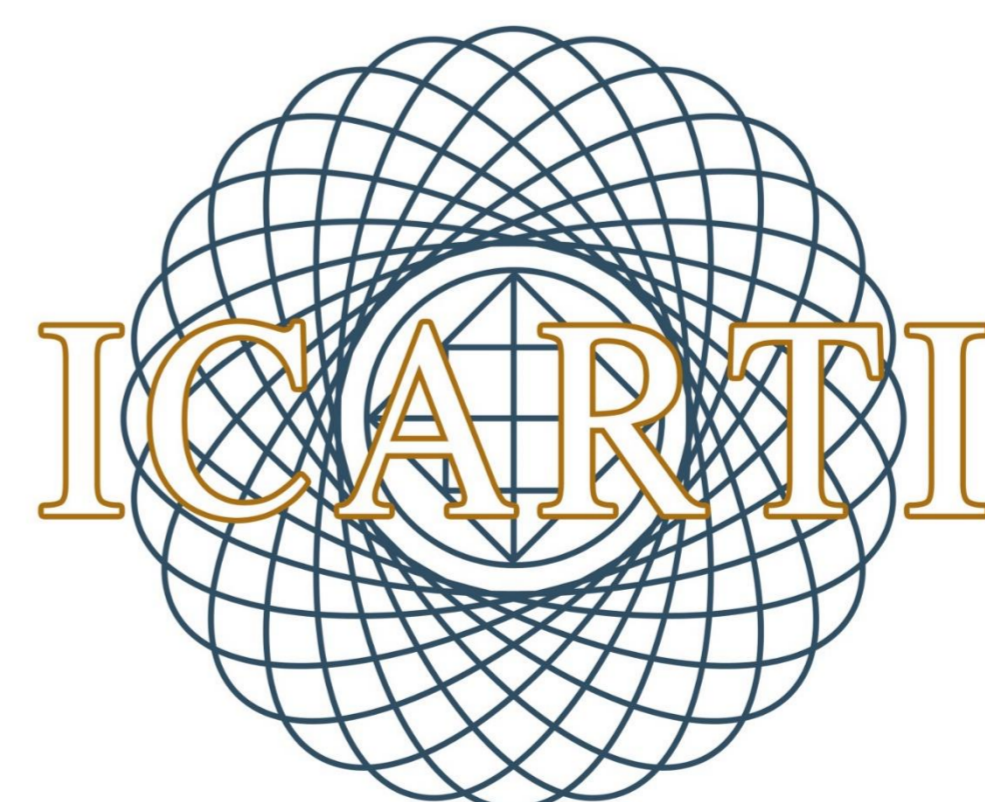
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Improving the Black Sea Environment

Black Sea, a highly-isolated inland sea, is the largest anoxic zone in the world. Since the hydrogen sulfide was discovered in it, scientists adopted that there is no life in the depths of the Black Sea. Our project implies to use Black Sea hydrogen sulfide as a raw material source for hydrogen production, to reduce its presence in the sea and prevent further contamination. Due to low energy costs, hydrogen obtained through this process can become a real alternative to traditional hydrocarbons and will make it possible to reduce the future impact of the greenhouse effect on our planet.





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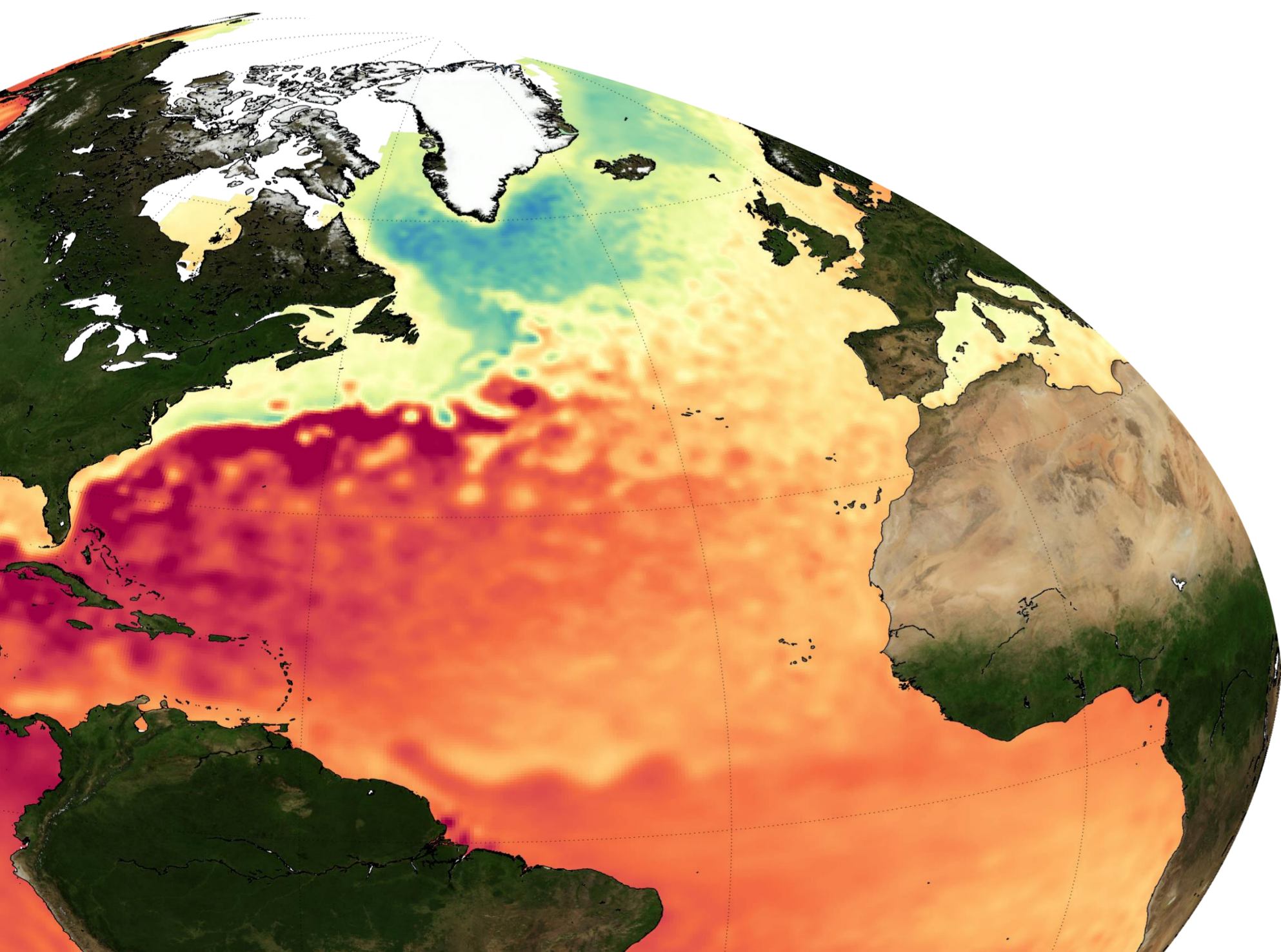
MISSION CHARTER

Sea level, wave & multi-observation for Copernicus Marine

CLS serves oceanographic applications, climate forecasting centers, geophysics and biology communities

CLS and its partners are deeply involved in the Copernicus Marine Service serving, as prime, 3 of 8 of its Thematic Assembly Center (TAC) :

- **Sea Level TAC:** operation of the Data Unification and Altimeter Combination System (DUACS) to provide sea level global and regional maps
- **Wave TAC:** CLS operation of a near-real-time wave service derived from altimetry and Synthetic Aperture Radar measurements
- **Multi Observations TAC:** provision of products derived from the combination of two or more different sensors (satellite and in-situ) using state-of-the-art data fusion





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SeaMark:

Tipping the scales in favour of seaweed

The objective of SeaMark is to demonstrate how to scale up innovative seaweed cultivation and processing into price-competitive product applications, making the entire supply chain attractive for commercial investments. The justification is that seaweed's potential as a versatile and abundant renewable resource is yet to be fully exploited. Demonstration of high-TRL (technology readiness level), marketable bio-based products will convince key players and decision makers that technological innovation, resource efficiency and environmental remediation should go hand-in-hand, as the combination creates long-term value for European society and accelerates the transition to a green, circular economy.



Frederick BRUCE

SeaMark Communications
Manager

*SUBMARINER Network for
Blue Growth EEIG*





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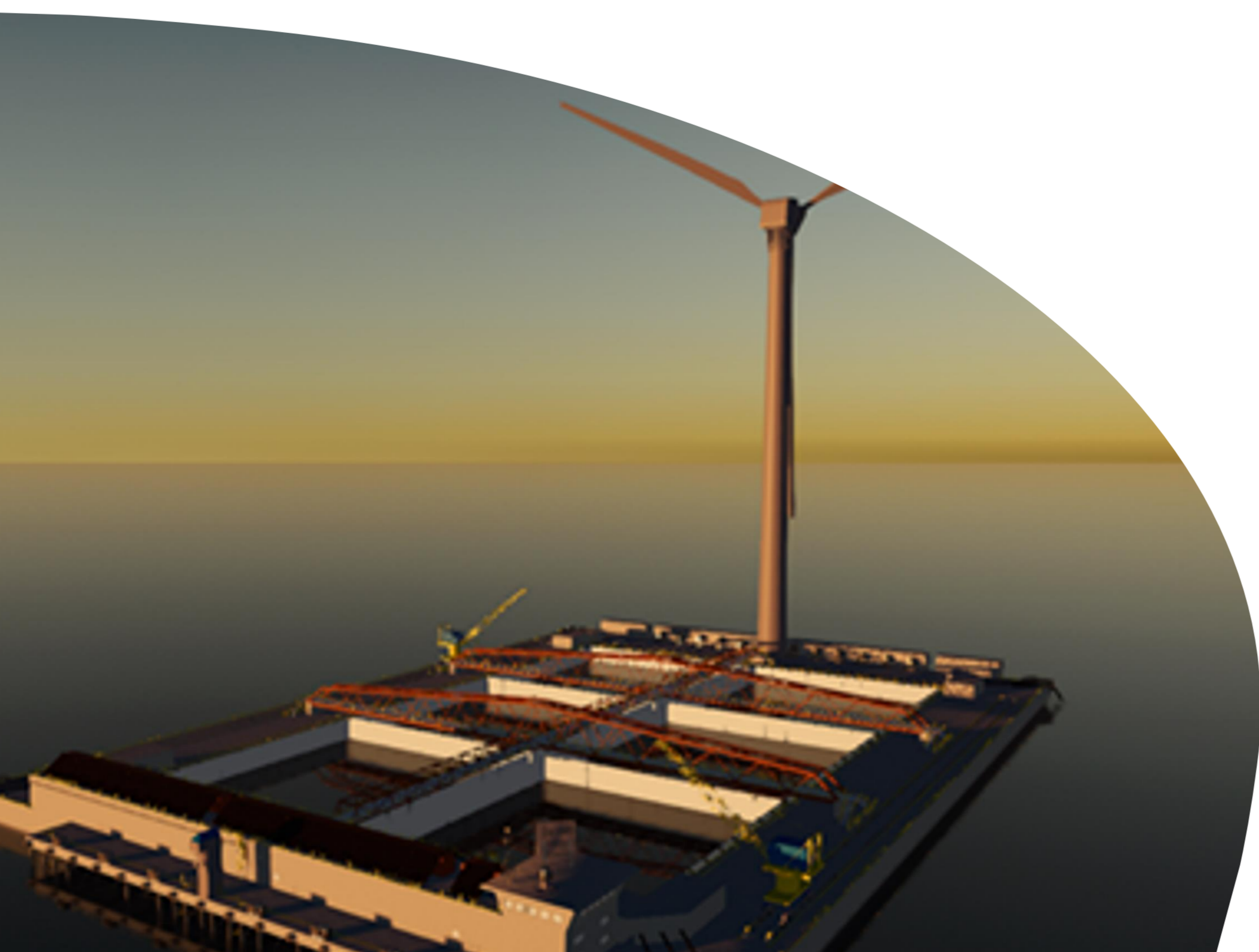
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MULTI-FUNCTIONAL OFFSHORE BLUE GROWTH FARM

Combining fish farming and offshore renewable energy production is key to sustainably exploit marine resources and support the growing global demand for seafood and clean energy. The Blue Growth Farm (BGF) project aims at expanding marine aquaculture capacity through the design of an efficient multi-functional offshore installation, which combines modern automated fish production with generation of renewable energy from wind, waves & solar and enabling microalgae cultivation for industrial applications. The integration of multiple sub-systems into one complex infrastructure, the shared use of assets and sea resources is verified against harsh environment of three real installation sites condition.





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Under the Surface

Under the Surface is a project by Ukrainian artist Lera Litvinova highlighting the impact of the war on marine pollution in the Black Sea, and the effect on marine ecosystems and sustainable development. Lera held an exhibition "Renaissance" at the Museum of Outstanding Figures of Ukrainian culture in Kyiv showcasing her ceramic installations along with information developed together with her scientific collaborators. The exhibition raised public awareness of issues affecting the Black Sea and drove conversation around future actions for sustainability. This project is supported by the EMBracing the Ocean artist-in-residence programme.



2021 United Nations Decade
2030 of Ocean Science
for Sustainable Development

European

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Sounding the Ice Factory

Michael Begg is a Scottish composer working in collaboration with an international network of **climate scientists** to transform observational data and model projections from the Antarctic into engaging and immersive **musical recordings and performances**. The work reveals the complexity surrounding this mysterious and vast territory, its fragility and potentially catastrophic **tipping points**, through the interactions of thermocline depth, salinity, polynya growth, ice coverage and extreme weather fronts. The work is supported by the **EMBracing the Ocean** artist-in-residence programme and recordings will be released on all major digital music platforms in 2023.



2021 United Nations Decade
2030 of Ocean Science
for Sustainable Development



SCAN ME

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EMBracing the Ocean

EMBracing the Ocean is EMB's **artist-in residence programme** providing grants for creative individuals or groups to co-create work with Ocean scientists aiming to inspire wide-reaching **societal change for Ocean sustainability**. In 2022 the programme supported Ukrainian artist **Lera Litvinova** to develop installations focusing on the impacts of the war on pollution in the Black Sea, Scottish composer **Michael Begg** to create music compositions based on Antarctic climate data, and French chorographer **Emily Lartillot** to develop a dance production to communicate about critical yet threatened mangrove ecosystems. These projects are all Mission Ocean actions.



EMBracing the Ocean

EMB's artist-in-residence programme



2021 United Nations Decade of Ocean Science for Sustainable Development 2030

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Of Roots and Sea

“Of Roots and Sea” is a dance production highlighting mangroves as a critical yet threatened ecosystem between land and sea. Messages of concern and hope are communicated to the audience by youth dancers, raising awareness in an emotive manner. The production was co-developed by French choreographer Emily Lartillot (Steps for a Change) and scientist Yunne Shin (IRD) and premiered at University of the Earth, UNESCO, Paris in November 2022. The choreography development was supported by the EMBracing the Ocean artist-in-residence programme.



SCAN ME



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RACING WITH PURPOSE

Policy

Recognising the inherent rights of the ocean gives the ocean a voice globally. Join us and stand up, speak up and sign-up for ocean rights.

www.onebluevoice.net

Learning

The Ocean Race is creating a new generation of ocean advocates, by helping young learners across the planet understand the issues affecting our marine world and inspire them to join us on the journey to protect and restore the seas. learning.theoceanrace.com

Science

As they sail across the planet, teams in The Ocean Race collect valuable data about the state of the seas, helping to grow understanding about the impact of human activity on the marine world.

THE OCEAN RACE RACING FOR SCIENCE

The Ocean Race is a six-month long sailing competition that is dedicated to helping to protect the seas. All of the teams take part in a science programme by collecting data about the health of the ocean as they race around the world. Gathering data from parts of the planet where little information has been recorded is particularly valuable for growing understanding about the impact of human activity on the seas.

This is some of the vital data that the boats will be gathering.

- 1 SEA SURFACE TEMPERATURE**
The atmosphere heats up continuously and a large part of this excess energy is absorbed into the ocean, with tremendous consequences. Ecosystems become out of balance, causing a cascade of negative effects on marine life.
- 2 METEOROLOGICAL DATA**
Weather stations onboard the boats, along with drifter buoys that the teams deploy in the ocean, measure barometric pressure, wind speed and other data that feeds into weather forecasts.
- 3 CARBON DIOXIDE**
Measuring pCO₂ (partial pressure of carbon dioxide) in the ocean helps scientists predict the sea's capacity to absorb it in future. Locking carbon away from the atmosphere prevents it from contributing to climate change, however, increasing levels in the ocean cause acidification, which impacts marine life, such as coral.
- 4 CURRENTS**
The ocean regulates the climate, by absorbing the sun's heat and transporting it through ocean currents around the globe. Drifter buoys, deployed by the boats, measure these currents, giving valuable insights into climate change.
- 5 SEA SURFACE SALINITY**
Measuring how salty the sea is helps scientists understand the effects of climate change on the ocean, ocean chemistry and how water circulates, largely controlled by the amount of rain and ocean currents, which are themselves altered by the climate crisis.
- 6 TRACE ELEMENTS**
Trace elements, such as iron (Fe) and manganese (Mn) are needed by microorganisms, such as phytoplankton, which are the base of the marine food chain. The amount and distribution of these elements in the water impacts all ocean ecosystems.
- 7 OXYGEN**
Rising sea temperatures and pollution are lowering oxygen levels in the sea. Measuring levels of dissolved oxygen can help scientists track the ocean's health and understand the impact of climate change on it.
- 8 MICROPLASTICS**
Although they're no bigger than 5mm long, these plastic particles can be harmful to animals. The samples gathered by teams in The Ocean Race help scientists understand where they come from and where they settle.

Other data points shown: **93%** of excess heat is stored in the ocean; **30%** of all our CO₂ emissions are absorbed by the ocean; **Every second breath you take** is from oxygen produced by microorganisms in the ocean; **<5mm** size for microplastics.





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The 1st Aegean Ro-boat Race

An autonomous boat competition

Syros, Greece on the 10th-12th of July 2023

<https://smartmove.aegean.gr/roboat-race/>

The Aegean Ro-Boat Race is an international university level competition, challenging teams to design and develop innovative autonomous robotics systems that can perform at sea in real world coastal conditions.

The purpose of which, is to foster innovation, while strengthening ties between academic institutions, industry, and stakeholders.



UNIVERSITY OF THE
AEGEAN

SCHOOL OF ENGINEERING
DEPARTMENT OF PRODUCT
AND SYSTEMS DESIGN ENGINEERING



MarineTraffic





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Go figure! Biodiversity changes in European seas.

The idea behind MARBEFES (MARine Biodiversity and Ecosystem Functioning leading to Ecosystem Services) is to determine links between biodiversity, ecosystem functioning and the resulting ecosystem services, societal goods and benefits. We aim at achieving ecological and socio-economic valuation through a validated set of innovative tools to enhance policy and governance for the marine environment and to secure its benefits for current and future generations. We will progress beyond the state-of-the-art to understand causes and consequences of biodiversity decline, and the loss and gain of ecological, economic and cultural value and the repercussions for marine management and governance across European seas.





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Tunisia: A new research dynamic on marine litter

In the frame of the BlueMed Initiative and since 2018, the plastic waste in the Mediterranean has been identified as one of the highest priority them in Tunisia. And even if only timely actions have been carried, marine related scientific research has experienced an increase interest, in particular thanks to projects developed within the framework of cooperation with Europe (H-2020, ENICBC-Med, Interreg, etc.). These actions have made it possible to obtain results either at the coastal level and/or offshore which deserve to be refined in order to better identify the accumulation zones, the mechanisms of dispersion or even the eco-toxicological aspects.

At the national level, this crucial issue has been recently studied by the Tunisian research group through a set of national, bilateral and international projects such as Plastic Buster, COMMON, Clever-Mar, Phantom, etc.

Following, we provide, for information and not exhaustive, some of the actions and tasks carried out.

CLAIM Project | Cleaning Litter by developing and Applying Innovative Methods in European seas



Courtesy from Prof. Mohamed BANNI



Courtesy from Dr. Hela JAZIRI



Courtesy from Pr. Malika BELHASSEN



Pr. Cherif SAMMARI





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MISSION CHARTER

Mission LOANO

The Municipality of Loano is part of the “Coalition of Mayors for the Mission”, acting together & leaving “no one behind”. Mission LOANO focuses on:

- recovery and re-use, for irrigation purposes, waste water from public and private swimming pools (estimated water recovery: 27.000 m³/year)
- use of green (solar) energy to power all the related operation (water collection, filtration, treatment, storage and distribution)

Start: 1/12/2022 – **Finish:** 31/12/2025 **Budget:** 500 K€

Partners: SDG4MED, Municipalities of Genova and Mazara del Vallo



Il Sindaco
Luca Lettieri



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MISSION CHARTER

Mission LAIGUEGLIA

The Municipality of Laigueglia is part of the "Coalition of Mayors for the Mission", acting together & leaving "no one behind". Mission LAIGUEGLIA focuses on:

- raise citizens and tourists' awareness on the importance of the sea for vulnerable person ("seatherapy")
- promote, through a context among innovative startups, citizen science studies on mobile devices-based reduction of microplastics pollution of the marine area of Laigueglia.

Start: 1/12/2022 – **Finish:** 31/12/2026 **Budget:** 750 K€

Partners: SDG4MED, Municipalities of Genova and Mazara del Vallo





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MISSION CHARTER

SEATY: Restore Pollara marine ecosystem

We will protect and restore marine and freshwater ecosystems and biodiversity in a stretch of coastline extending for about 800 meters in Pollara (Salina Island, Sicily), establishing a local management committee and structuring a scientific data monitoring system, aimed at recognizing an Other Effective Area-based Conservation Measure, OECM.

In this area, which will be delimited by a complex of buoys and lines, exploration, education, awareness raising and scientific research activities will be organized.

The synergy between these activities will make it possible to rediscover the value of the bay of Pollara and will guarantee an adequate protection system capable of mitigating the effects of the most impacting activities.





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MISSION CHARTER

Mission GARLEND A

The Municipality of Garlenda is part of the “Coalition of Mayors for the Mission”, acting together & leaving “no one behind”. Mission GARLEND A focuses on:

- citizens engagement in preserving water resources
- houses, touristic resorts and agricultural enterprises as independent as possible, thanks to rainwater & waste waters recovery and reuse systems.

Start: 1/12/2022 – **Finish:** 31/12/2026 **Budget:** 3000 K€

Partners: SDG4MED, Municipalities of Genova and Mazara del Vallo





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MISSION CHARTER

Coalition of Mayors for Mission Ocean

Promoted by Genova & Mazara del Vallo, the Coalition encourages a common Strategic Deployment Agenda tuned with the Mission Implementation Plan.

Accordingly, the involved Municipalities will, jointly:

- a) deploy solutions to protect, restore and depollute marine and freshwater ecosystems
- b) share knowledge and good practices on sustainable and carbon-neutral blue economy
- c) co-design with citizens, students & local stakeholders

Involved Municipalities as of 31.12.2022: Genova, Catania, Mazara del Vallo, Garlenda, Balestrino, Borghetto S. Spirito, Laigueglia, Loano

Secretariat: SDG4MED





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MISSION CHARTER

LIFE4MEDECA – Knowledge Center

The MEDSECA (Sulphur Emission Control Area), agreed by the contracting States of the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean, **will enter into force on 1 July 2025.**

The “LIFE4MEDECA Knowledge Centre” is fostering the MED SECA by supporting:

- legislative governance / implementation road maps
- a shared approach to incentive & financial mechanisms for cooperation and enforcement.

Start: 1/3/2022 – Finish: 31/12/2023 Budget: 450 K€

Partners: SDG4MED, Fundacion Philippe Cousteau, 3D4EU





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MISSION CHARTER

Mission MAZARA

Mazara del Vallo's development strategy is aligned with the Mission Ocean implementation plan: this is Mission MAZARA, a series of initiatives to enable:

- fishermen to collect plastic from the sea to be re-used for recreational resorts of children/youths
- fish value chain data collection, storage & sharing
- low emission fishing by retrofitting green tech on fishing boats.

Start: 1/6/2022 – Finish: 31/12/2023 Budget: 1000 K€

Partners: SDG4MED





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MISSION CHARTER

Mission BALESTRINO

The Municipality of Balestrino is part of the “Coalition of Mayors for the Mission”, acting together & leaving “no one behind”. Mission BALESTRINO aims at **rainwater collection and re-use** and increased resilience to both dry periods and floodings due to extreme raining events.

This will be achieved by refurbishing the civic aqueduct network and by digitalisation of related controls and services.

Start: 1/1/2023 – Finish: 31/12/2026 Budget: 800 K€

Partners: SDG4MED, Municipalities of Genova and Mazara del Vallo.





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MISSION CHARTER

Atlantic-Arctic transformative innovation

A-AAGORA builds on the successful implementation of Nature-based-solutions (NbS) at three demonstrators (Demo-PT, Demo-IE, Demo-NO), replicable and upscaled elsewhere, to which the necessary socio-technological tools will be produced as required for a realistic Ecosystem-based-Management (EBM) planning cycle (up to TRL/SRL 7). The Living Lab concept will foster the exchange synergies at multiple scales between researchers and users, decision-makers and local communities, industry, and SMEs. A-AAGORA will demonstrate that restoration of aquatic ecosystems is possible at a large scale through reduction of pressures, EBM, and effective NbS including blue reforestation to boost coastal resilience to climate change impacts (EU Horizon GA 101093956).



A-A
AGORA



universidade
de aveiro



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Hydrogen mobility in Ruse, Bulgaria

The main objective of the project is to develop technology to use hydrogen to power cargo ships as a first step in the decarbonization of maritime applications in the Danube region and to demonstrate the use of hydrogen in public transport through 20 fuel cell buses on existing routes in city of Ruse. It is planned to create a circular system including the production of green hydrogen and use it.

To the mitigation of emissions from marine vessels and buses, is also expected to have significant local environmental benefits by reducing the impact of air pollution on the Danube ecosystem.



UNIVERSITY OF RUSE
"ANGEL KANCHEV"



ОБЩИНА РУСЕ





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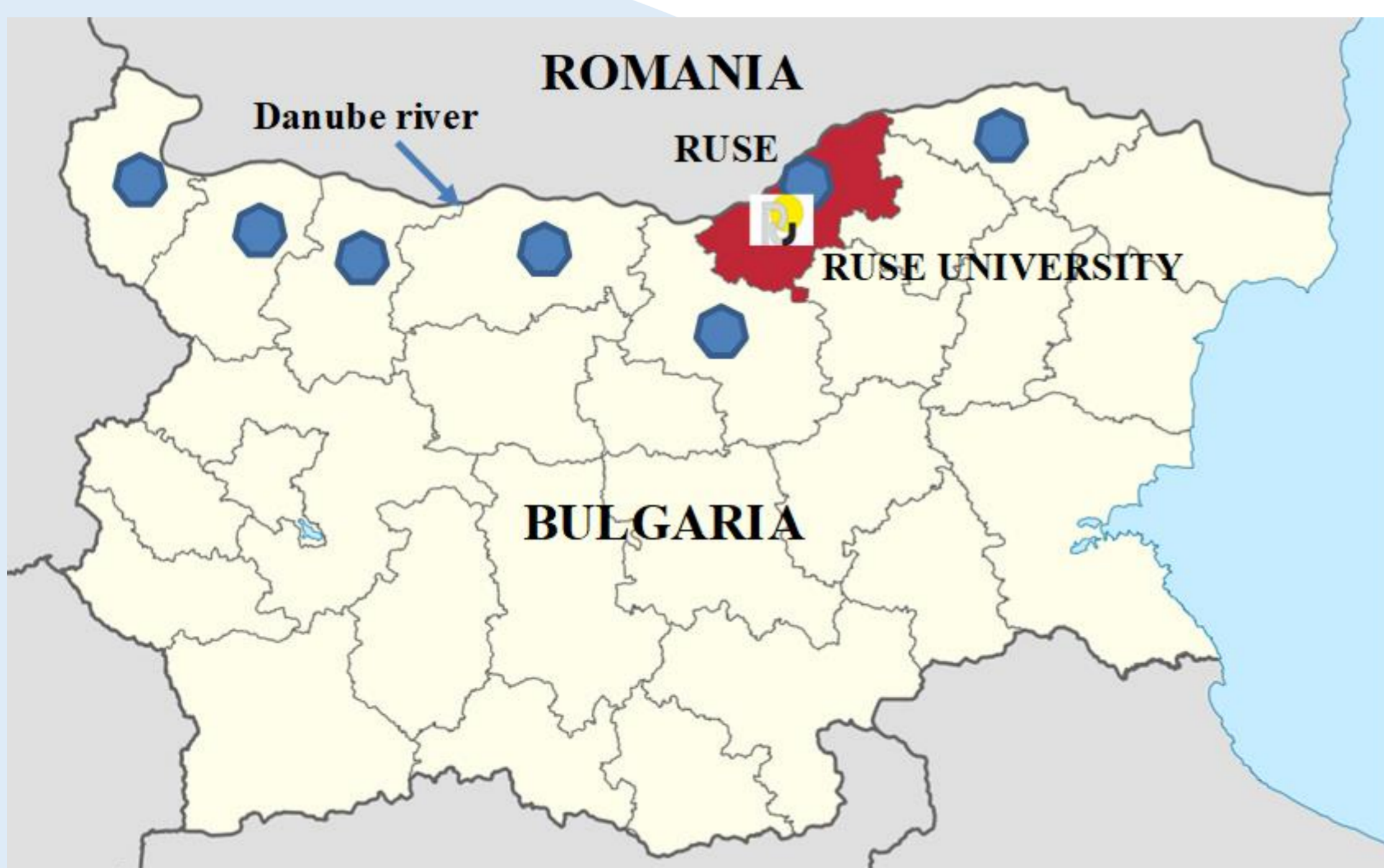


MISSION CHARTER

Bulgarian cross-border hydrogen valley

The main goal of the project is to develop and deliver hydrogen valley in the Bulgarian-Romanian section along the Lower Danube in which to produce and use green hydrogen. The application of hydrogen is planned to be for: road transport; cargo ships sailing on the Danube; industries for the production of glass, paints; in heating of municipal buildings, kindergartens and schools.

The establishment of a Danube hydrogen ecosystem with the growth of hydrogen production, storage, transportation and construction of the necessary infrastructure as well as strengthening research and innovation in this area will contribute to the development of the region.





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Mission BORGHETTO

The Municipality of Borghetto Santo Spirito is part of the “Coalition of Mayors for the Mission”, acting together & leaving “no one behind”. Mission BORGHETTO aims at:

- zero emission access to local marine historical and archeological sites
- sustainable coastal local mobility for citizens and tourists.

Start: 1/12/2022 – Finish: 31/12/2026 Budget: 1500 K€

Partners: SDG4MED, Municipalities of Genova and Mazara del Vallo





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DuWo the smart box for fishing

DuWo the smart fish box reusable with microchip for the traceability of the fish and fish box

La cassetta intelligente a rendere per la pesca sostenibile
 The smart box for sustainable fishing
 La caja retornable inteligente para la pesca sostenible

duWo[®]

DUWO A DIFESA DELL'AMBIENTE
 DUWO IN DEFENSE OF THE ENVIRONMENT
 DUWO EN DEFENSA DEL MEDIO AMBIENTE





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EuBlueNet: Connecting projects to support Mission Ocean's objectives

Are you a EU funded project or initiative actively contributing to achieve the EU Mission - Restore our Ocean and Waters' objectives? Join the EuBlueNet!

The main goal of the EuBlueNet is to maximise the efforts, increase the knowledge sharing, networking, mutual learning, coordination of joint activities and events among EU funded projects dealing with oceans and waters protection.

The EuBlueNet, launched under the Lighthouse CSA BlueMissionMed, builds on the successful experience of the European Bioeconomy Network, a proactive alliance of more than 130 EU funded projects and initiatives in the bioeconomy field.

<https://eublunet.eu/>





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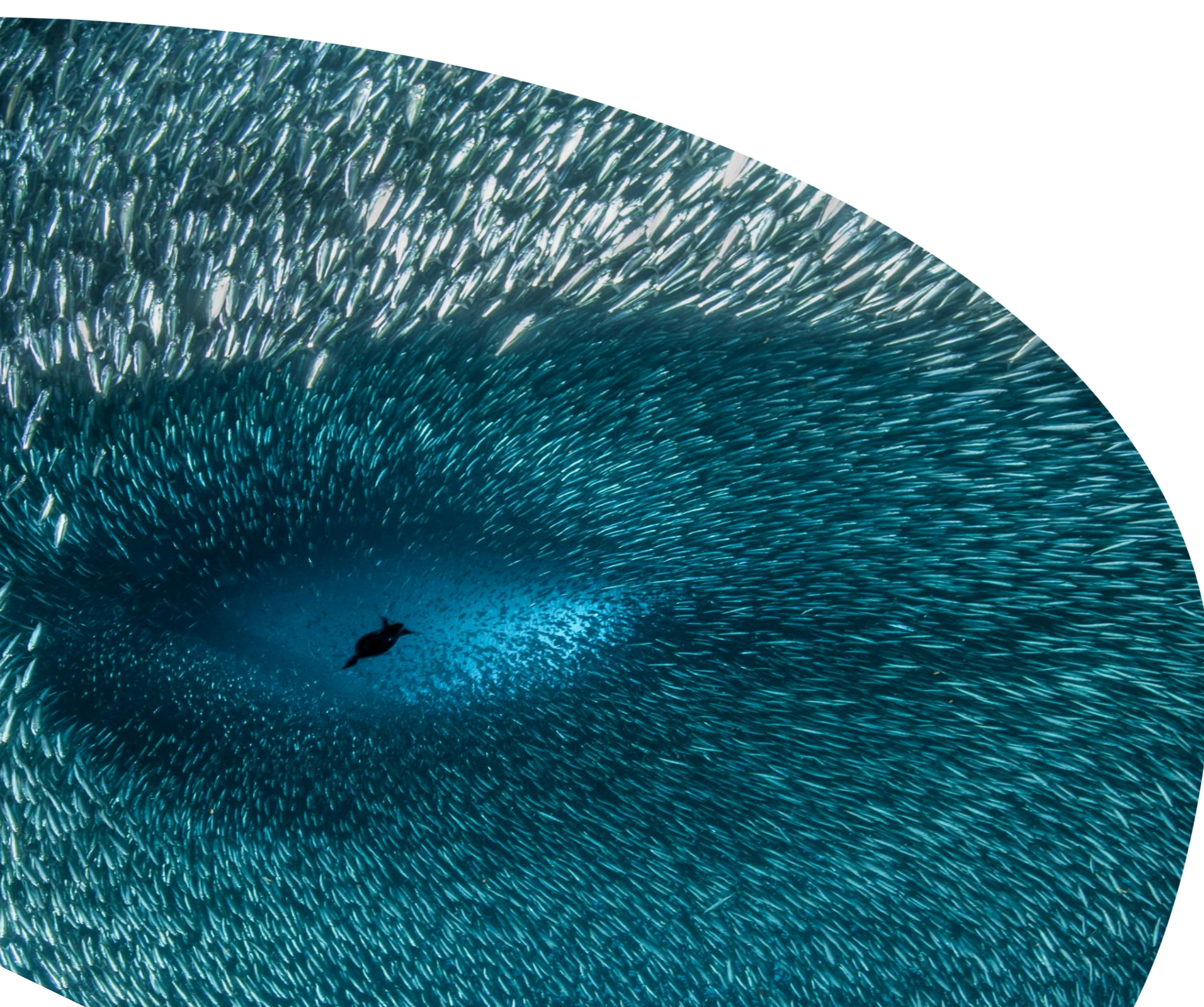
MISSION CHARTER

RESEARCH & OUTREACH

FOR A HEALTHY, SAFE AND PEACEFUL OCEAN

Europe Jacques Delors is convinced that public policy research and citizens outreach have a key role to play in the protection and restoration of ocean and waters.

As the first think-tank in Brussels focusing on ocean and water issues, EJD has published on ocean governance at EU and global levels, public policies related to ocean protection and marine biodiversity preservation (e.g., the need to protect Antarctica waters). By disseminating knowledge and policy recommendations, we are forerunners in raising European decision makers and citizens awareness on ocean issues.



Europe
Jacques Delors
Thinking Europe



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Land-Based solutions for PLAstics in the Sea

Once in the sea, plastics fragment into particles moving with the currents and ocean gyres before washing up on the coastline. The smaller the size the higher the risk posed by these particles to organisms and human health. The EU-funded LABPLAS Project explores new techniques and models for the quantification of small micro- and nano-plastics (SMNP).

It aims to determine reliable identification methods for a more accurate assessment of the abundance, distribution, and toxicity determination of SMNPs and associated chemicals in the environment. LABPLAS also develops practical computational tools to map plastic-impacted hotspots to promote scientifically sound plastic governance.



LABPLAS



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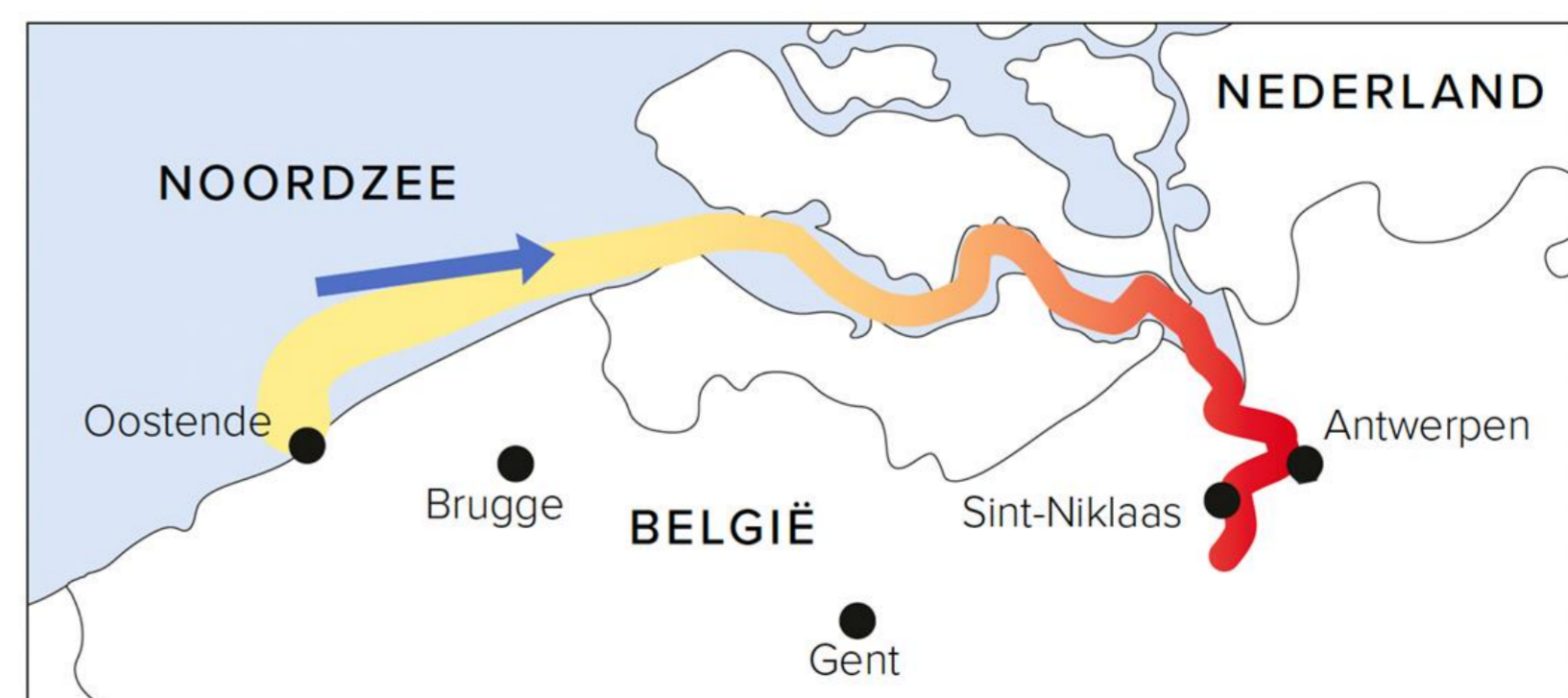


MISSION CHARTER

North Sea and Scheldt river, connected but very different

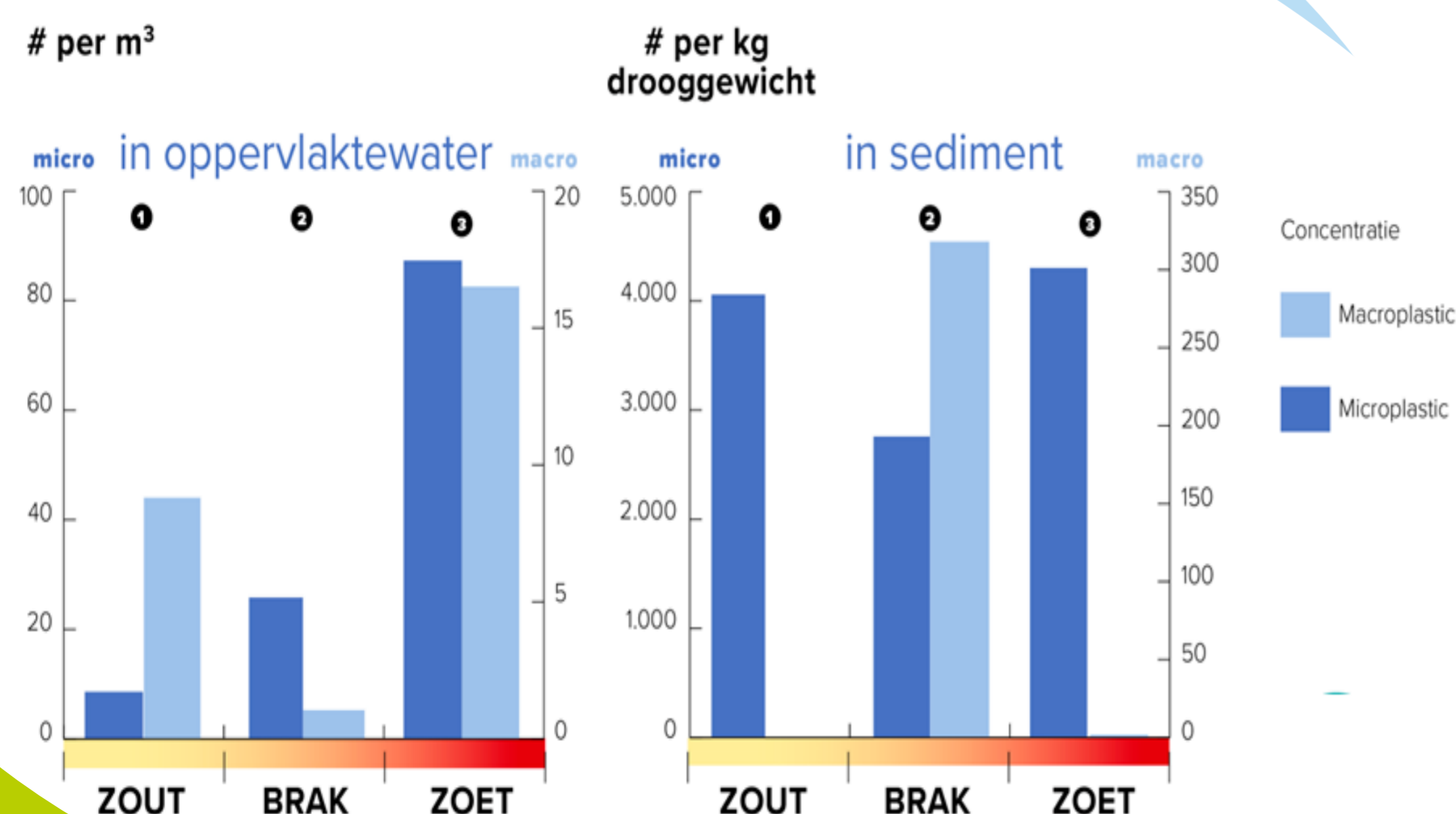
In November 2022, the week-long 'Expedition Simon Stevin' examine three major challenges of our time - litter, climate change and biodiversity- in a comparable and innovative way for the first time in Belgium. From salt (North Sea), over brackish (Westerschelde) to freshwater (Zeeschelde).

The results suggest that the river Scheldt is clearly more polluted with plastic than the North Sea, but do not necessarily function as a 'source' of plastic. Although analyzes of e-DNA are still preliminary, it offers new opportunities for sound and rapid biodiversity research. Measurements of CO2 in fresh water are five times higher than in the sea.



PLASTIC

micro- en macroplastic





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3D Initiative – Danube Delta Decarbonisation – Building local based solutions for Decarbonisation Standards in Wetlands

3D Initiative proposes a vision of the Danube Delta and Floodplain transformations, related to all ecologic, economic and societal components, towards a well-preserved biodiverse region with net zero greenhouse gas emissions by 2050 (significantly reduced carbon footprint by 2030), in social innovative context, enriching local economy and capitalising local opportunities for job creation and local population benefits.

This systematic multidisciplinary initiative proposes complete innovation management process (supported by innovation agencies and companies in the group) in order to bring the region to the decarbonisation goal and creating standard for wetlands decarbonization.

3D will concretise in Research, Innovations, Scaling Up actions.



3D Initiative
Decarbonisation
Danube
Delta



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RESEARCH CENTRE FOR WATER SYSTEMS

The main objective of the proposed action is to establish a centre for research and education in the field of Water Systems, building on a partnership between EU level internationally-leading counterparts and the Technical University Gheorghe Asachi from Iasi (TUIASI). The city of Iasi in the North-East of Romania is a strong research and higher education hotspot.

TUIASI intends to develop a centre for research and education in the field of Water Systems and needs the strong support of internationally-leading counterparts.

The Centre will enhance networking activities and strengthen the research collaboration between leading research institutions in Romania and EU.





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Oceanus Action

OCEANUS organization founded in 2005, aims purpose is the promotion and development of scientific research aimed at the protection and conservation of endangered marine ecosystems, endangered aquatic species and the study of interactions with human activities through projects, events and environmental awareness campaigns.

The ongoing projects concern:
Biodiversity regeneration (EMFF);
Marine Mammals Survey in Mediterranean Sea;
Plastic pollution Survey Mediterranean Sea;





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AQUAWIND: LINKING WIND POWER AND AQUACULTURE

AquaWind is an EU project funded by the European Maritime and Fisheries Fund. It is a unique initiative that combines offshore renewable energy production with fish farming in a floating wind platform, allowing the optimisation of the marine space use.

Main project results will be the test and assessment of *Seriola* aquaculture production with energy generation to demonstrate that aquaculture and offshore energy can work in combination.

The project supports the reduction of Europe's carbon footprint and dependence on fossil fuels by harnessing the potential of marine renewable energy resources, while promoting sustainability and competitiveness of the EU aquaculture sector.



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MISSION CHARTER

In-depth assessment of the environmental impact and sustainability of LED and SFSC

The Local economic development (LED) and its success based on sustainable rural areas, multifunctional agriculture and the experiential economy. High value-added local products and short food supply chains (SFSCs) based on local resources, and local traditions. Primary and small holders appearing in the countryside have the potential to improve the economy of the countryside, as well as to promote the development of sustainable and circular farming systems and allow their use for local economic regeneration. The LED aims to improve the economic performance and quality of life in all areas of the region, with protection of local resources such as water, and soil. All economic activities along rivers have an impact on rivers, and vice versa. All activities in the river basin have an impact on the river. Decentralised wastewater treatment with resource recovery options tailored to local needs contribute to LED along with pollution mitigation.



Pannon Egyetem
University of Pannonia



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MISSION CHARTER

INNOVATION PLATFORM SUSTAINABLE SEA AND OCEAN SOLUTIONS ISSS

With the goal to tackle the tremendous challenges of our oceans, seas and coastal areas, +Atlantic CoLab, AZTI, ENEA, Fraunhofer, IFREMER, RISE, SINTEF, TECNALIA, TNO and VTT launched ISSS.

Our vision is a climate-neutral continent through a completely green-blue transformed economy and society in 2050.

Our mission is the responsible utilization of our oceans, to harness their potential and create additional value and future-proof jobs in the European marine and maritime sectors.

We develop and master **innovative technologies** for a **sustainable blue economy** to boost the European Green Deal and facilitate a competitive European industry.





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INNOVATIVE SOLUTIONS TO TACKLE THE MARINE LITTER ISSUE

The H2020 RIA Project MAELSTROM provides innovative solutions to the complex issue of the removal and sustainable management and recycling of marine litter.

MAELSTROM sets a multidisciplinary approach to assess litter distribution and impact in two coastal areas: the Porto region (Portugal) and the Venice area (Italy).

MAELSTROM develops and implements automated technologies to identify and remove marine litter from the coastal environment verifying their effectiveness by monitoring the biological communities status over time.

MAELSTROM tracks, sorts and recycles the collected marine litter transforming it into valuable raw materials.



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MISSION CHARTER

ZERO carbon transport and energy systems in Danube region

COMOTI (Ro)+ University of Rousse "Anghel Kanchev" (Bg)
+ ICPE-CA (Ro) + Silistra Municipality (Bg)

Objectives:

- to **implement and upscale** existing solutions developed during several projects from 2008 to 2016 under Romania-Bulgaria cross-border cooperation program;
 - electrical/hydrogen powered boats (8 to 20 passengers);
 - kinetic water turbine technical project (7kW for 1m/s water velocity);
- to **explore** the pathways to *innovative aspects* of other *products*:
 - wind turbines and eco-friendly energy generation solutions.

Budget: ≈12 million Euros (25% private +75% EU).

Impact : Zero Carbon Footprint of the relatively small boats travelling on the Danube towards Delta, or crossing the Danube where needed due to missing bridge(s)



COMOTI
ROMANIAN RESEARCH &
DEVELOPMENT INSTITUTE FOR
GAS TURBINES



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CIRCALGAE

CIRCular valorisation of industrial **ALGAE** waste streams into high-value products to foster future sustainable blue biorefineries in Europe

Our goal is to develop sustainable algae-based biorefineries and products supporting the health of aquatic ecosystems for a healthy planet and people.



Optimization of algae cultivation parameters



3 blue biorefineries



New high value ingredients



1000 consumer acceptance surveys and 4 cross-sectional training workshops



12 demonstrator products

New circular economic model

Reduction of CO₂

New high value resources

21 partners

48 months

Project budget
10.322.894 €



CIRCALGAE
Food • Feed • Cosmetic

SCAN ME



CIRCALGAE

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Mission GENOVA – Involving citizens

The “Genova Lighthouse City Strategy” is fully aligned with Mission Ocean’s implementation plan. **Mission Genova** aims at raising awareness of institutions, citizens and other stakeholders: all events organized by Genoa will amplify Mission Ocean’s message.

This will include, but not be limited to, **THE OCEAN RACE GENOVA THE GRAND FINALE** which Genoa is organizing for 2023: after circumnavigating the world, on 24/6/2023 ocean racers will arrive at the “Genova Ocean Live Park” where all Mission Ocean’s actors & stakeholders will convene.

Start: 1/1/2023 – Finish: 31/12/2026 Budget: 12.000 K€

Partners: The OCEAN RACE, SDG4MED.



 **THE OCEAN RACE**
GENOVA THE GRAND FINALE 2022-23

