



Interreg



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NEXT Black Sea Basin



TRANSNATIONAL TECHNOLOGY
TRANSFER NETWORK for BLACK SEA BASIN
T3N-BSB PROJECT

Model Project Database

Successfully Implemented Projects in the Black Sea Basin Countries



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Interreg NEXT Black Sea Basin Programme

A platform for strengthening connections between the Black Sea Basin (BSB) countries and, creating new cooperations in the fields of research, innovation and environmental protection, bringing together regional actors to contribute to sustainable resource management for the benefit of local citizens.

Interreg NEXT Black Sea Basin Programme aims to develop and deepen cross-border cooperation in the BSB on a transnational basis.

Transnational Technology Transfer Network for Black Sea Basin Project

Within the 2021-2027 period of the program, the project titled “T3N-BSB Transnational Technology Transfer Network for Black Sea Basin” has been entitled to receive support and started to be implemented as of July 2024. T3N BSB Project aims to address the need to develop sustainable transnational network structures and platforms in order to share good practices and knowledge on the use of innovative technological developments.

Project Consortium



TÜRKİYE
Karadeniz Technical
University
(KTU)



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GREECE
Centre for Research
and Technology Hellas
(CERTH)



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BULGARIA
Bulgarian Association for Transfer
of Technology and Innovation
(BATTI)



ROMANIA
“Dunarea de Jos”
University of Galati
(UDJG)



Duration
July 2024-
January 2026



Total Budget
498.120,00
EURO



EU Funding
448.308,00
EURO



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Purpose of the Project

To create sustainable transnational network structures among the Black Sea Basin countries of **Türkiye, Bulgaria, Romania** and **Greece** and to contribute to the development of the research and innovation capacities of these countries and the adoption of advanced technologies by sharing good practices and knowledge on the use of innovative technological developments, especially in the fields of **blue economy, low carbon economy, climate change resilience** and **adoption**.

Project Goals

-  To strengthen international cooperation between target groups and organisations in the **Black Sea Basin**, to improve their capacities in terms of technology transfer and ecosystem, to support joint research activities and promote innovative solutions.
-  To increase the **sharing of knowledge** and experience among regional stakeholders by establishing a sustainable technology transfer network.
-  To bring target groups together with successful project outputs and the **T3N-BSB portal**, and to enable them to establish international, new, and technological collaboration.
-  To lead the planning and development of **new research** and innovation projects and studies, to improve their competitiveness and innovation levels in the international arena.

Target Groups



Entrepreneurs



Academicians



Technology
Transfer Ecosystem



Industrialists



Students



Professionals
Functioning on
TT Interfaces



Organized
Industry Regions



Chambers of
Commerce and
Industry



Business Support
Organizations

Model Project Database: Successfully Implemented Projects in BSB Countries

Building on the shared commitment of **Black Sea Basin countries** to environmental sustainability and climate resilience and other project topics, the **Model Project Database** presents a structured collection of exemplary projects that have been successfully implemented in partner countries; **Türkiye, Greece, Bulgaria, and Romania**. This database highlights national and international initiatives where project partners have acted either as coordinators or consortium members, showcasing achievements in the areas of blue economy, low-carbon development, and climate adaptation, among others. The Model Project Database serves as a **knowledge-sharing tool** that compiles **best practices** and lessons learned from completed projects. By making these initiatives visible in one interactive platform, it not only celebrates the achievements of participating institutions and countries but also inspires new collaborations and innovative approaches.

Through this database, stakeholders can explore projects that have already received support from national and international schemes and programs, ensuring that existing efforts gain wider recognition and that future actions build on proven results. By doing so, the database helps to prevent utilization of existing know-how, saving time and effort, enhances the visibility of impactful work, and strengthens cross-border cooperation in the Black Sea Basin.

As a comprehensive and accessible resource, the Model Project Database is designed for **higher education institution, research and public institutions, private sector representatives, academia policymakers and civil society actors** interested in advancing sustainable development, blue economy, low-carbon growth, climate change adaptation and resilience, circular economy, renewable energy, green innovation, and other areas contributing to environmental and socio-economic transformation and more. It provides a starting point for developing new initiatives that contribute to a more resilient, sustainable, and cooperative future in the Black Sea Basin.

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Alternative Models and Robust Decision-Making for Future Forest Management



Programme Name

Horizon Europe

Project Budget

3.999.998,75 €

Project Duration

2016 – 2020

Project Reference
Number / Code

676754-2

Priority Area



Resilience and Adaptation to Climate Change

Project Objectives

ALTERFOR's goal is to facilitate the implementation of forest management models (FMMs) better suited to meeting the challenges of the 21st century than those currently available regionally or nationally. This is accomplished by; identifying and developing FMMs robust in their capacity to deliver ES and overcome socioecological risks and uncertainties; assessing the impact of different FMM combinations in terms of resultant ES baskets on the European and landscape level; and facilitating the implementation of desired FMMs and improving cross-national knowledge transfer regarding their benefits, costs, management, and utilization.

Lead Organization

Swedish University of Agricultural Sciences

Lead Country

Sweden

Other Partners

Türkiye *2 | Germany *4 | Ireland *2 | Italy *2 | Lithuania *2 | Netherlands | Portugal *2 | Sweden | Slovakia | Austria | Belgium

Project Activities

- Implementation of silvicultural interventions (SM/FMM) on a stand basis
- Development of global scenarios and alternative approaches at the planning unit level
- Investigating the implementation capacity of newly developed approaches
- Assessment and quantification of ecosystem services

Target Groups/Beneficiaries

- Forest Management Planners
- Practitioners, Forest Managers
- City Planners
- Universities (Both for Research and Education)
- Research Institutions
- The Society

Main Outputs/Results

Alternative forest management models (aFMMs) developed at the case study areas were scaled up to **European level (EU28)** in order to assess the effects on a larger scale. The result was investigated for the EU in terms of available **harvest volumes, biodiversity, and global trade**. Setting aside larger areas would reduce production and increase imports from the rest of the world. This could in turn reduce biodiversity globally because if species richness in the land affected by imports of woody biomass to EU is higher than in the production forests of EU28. A balance could be struck between different ecosystem services by combining production oriented and multifunctional aFMMs, where multifunctional aFMMs could reduce the footprint of EU imports on the rest of the world.

Project Quote

ALTERFOR adopted a **case study approach** in order to cover a wide array of **eco-physiological, economic, and social conditions**. The selection of cases took into account two key dimensions in developing different aFMMs and raising the capacity for their implementation: amenity versus commodity production and the degree of centralization in forestry decision-making. Furthermore, working at case study level allowed for a direct involvement of stakeholders in the respective case study area (CSA). Two rounds of workshops at each CSA gathered **more than 700 individuals** representing various interest in utilization and protection of forests. The development of aFMMs considered conditions under three global scenarios with data on future demand of wood, wood prices, and climate conditions.

Remarks/Additional Notes

Knowledge, tools and instruments offered by ALTERFOR have the potential to lead to considerable long term impacts. By adopting **alternative, though realistic and implementable, forest management models** EU could improve its biodiversity status, increase harvests to satisfy fibre demands, and still maintain its role as net exporter of forest products to outside EU over the 21st century. Compared to current management, by successively introducing a combination of improved multifunctional and production management on only half the production forest, around 5% additional volume could be harvested at the end of the century, and still the biodiversity status would be better than with current management. The introduction of forest management alternatives adapted to climate change is also shown to **limit risks and increase resilience**. The means are there, the mobilization of forest owners, policy makers and other stakeholders is the next step.

Geographical Scope

(SE) Krono-berg county, (LT) Telšiai, (SK) Podpolanie, (IR) BA Unit 2 of Coillte, (IT) Veneto, (PT) Sousa Valley, (TR) Gölcük, (GE) Bavaria (West Augsburg), (GE) Brandenburg, (NL) South-East Veluwe

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[Click here for the project's website.](#)



A New Assessment System Proposal for Sustainable Campus Planning: Campus Sustainability Scorecard (KASK)

Programme Name

TÜBİTAK 1002

Project Budget

59.000,00 ₺

Project Duration

2023 - 2024

Project Reference Number / Code

123Y075

Priority Area



Resilience and Adaptation to Climate Change



Other: Sustainable Campus Planning

Project Objectives

Main objective of the project is **to develop a national assessment system**, the Campus Sustainability Scorecard (KASK), that **holistically evaluates environmental, social, economic, and administrative dimensions** in line with Türkiye's legal, socio-cultural, and economic conditions. Through this system, the sustainability performance of university campuses is presented with objective, measurable, and comparable indicators. The resulting data will guide university administrations in problem identification and strategic planning, while supporting a more effective and competitive position in international rankings.

Lead Organization

Karadeniz Technical University

Lead Country

Türkiye

Project Activities

- Structure of the Evaluation Hierarchy
- Development of the Indicator Hierarchy
- Ranking of Decision Options
- Determination of Primary Indicator Weighting Factors
- Creation of the KASK Scorecard
- Testing the KASK Assessment System

Target Groups/Beneficiaries

- University Management and Strategy Units
- Academics and Researchers
- Public Institutions and Policy Makers
- Students and Campus Community
- National and International Sustainability Platforms

Main Outputs/Results

Assessment System, Report, Strategy Guide

Project Quote

The nationally developed KASK project provides a **measurable and comparable framework tailored to Türkiye's conditions for assessing the sustainability performance of university campuses**, thereby making a strong contribution both to our institution's strategic planning and to national green transformation goals.

Remarks/Additional Notes

The KASK project represents the **first national and innovative system in Türkiye that evaluates the sustainability performance of university campuses across environmental, social, economic, and administrative dimensions**. Inspired by international criteria yet adapted to local conditions, it ensures both measurability and comparability. In this respect, it provides a significant innovation that serves as a model for green transformation and strategic planning processes in higher education.

Geographical Scope

Trabzon, Türkiye and Turkish Universities

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An INCIUsive ToolBox for AccElerating and Smartening Deep Renovation- InCUBE



Programme Name

Horizon Europe

Project Budget

9.955.817,99 €

Project Duration

2022 – 2027

Project Reference Number / Code

G.A. 101069610

Lead Partner Name

Ethniko Kentro Erevnas Kai Technologikis Anaptyxis

Lead Partner Country

Greece

Other Partners

Greece | France | Spain | Belgium | Italy *7
Poland | Spain *7 | Netherlands *4

Priority Area



Resilience and Adaptation to Climate Change



Low Carbon Economy



Other: Sustainable Construction

Project Objectives

InCUBE project aims to accelerate the EU Renovation Wave by developing standardized, lean, and integrated processes that make **building renovation faster, greener, and more affordable**. It focuses on **four pillars of innovation: industrialized off-site construction, advanced renewable energy and storage solutions, digitalization** through dynamic digital twins, and novel business models fostering collaboration. Demonstrated across large-scale pilot sites in Italy, Spain, and the Netherlands, InCUBE targets significant cost and time reductions, improved energy efficiency, and lower greenhouse gas emissions, while promoting social inclusion, workforce upskilling, and gender equality in the construction sector.

Target Groups/Beneficiaries

- Building owners and tenants
- Utilities companies and associations
- Contractors
- Technology and service providers
- Researchers
- Public authorities

Project Quote

InCUBE demonstrates **how digitalization, industrialized renovation, and social inclusion can transform Europe's building stock**. It offers scalable solutions that cut costs, save energy, and empower communities, while boosting skills and innovation in the construction sector.

Geographical Scope

Greece, Italy, Spain, Netherlands, Belgium, Poland, and France.

Project Activities

- **Development of innovative renovation solutions:** Off-site manufactured components, robotics for demolition/waste handling, new low-impact materials, and renewable energy/storage technologies.
- **Digitalization and integration:** Creation of Dynamic Digital Twins of buildings and products, integration with BIM, and deployment of the InCUBE Suite for seamless renovation coordination.
- **Demonstration in real buildings:** Large-scale pilots in Italy, Spain, and Netherlands, including cultural heritage buildings.
- **Social inclusion & skills development:** Activities for upskilling the workforce, promoting safer construction methods, and enhancing women's participation in the sector.
- **Testing new business models & market approaches:** Supporting SMEs and new market entrants, fostering collaboration between stakeholders, and validating replicable approaches for EU-wide adoption.
- **Monitoring & assessment:** Measurement of impacts in cost, time, energy efficiency, waste reduction, and GHG emissions to prove effectiveness and scalability.

Main Outputs/Results

- **InCUBE Suite** – a digital platform integrating BIM, digital twins, and data streams to coordinate all renovation phases.
- **Pilot Demonstrations** – 3 large-scale renovation demo sites (Italy, Spain, Netherlands; >18,448 m², >500 users, including a cultural heritage building).
- **Technical Solutions** – off-site manufactured renovation modules, robotics applications (demolition, drilling, waste sorting), and new low-GWP, self-RES energy and storage technologies.
- **Reports & Guidelines** – methodologies, business models, and policy recommendations for accelerating deep renovation across the EU.
- **Training & Upskilling Activities** – workforce capacity building, digital/technical training, with emphasis on inclusion and women's participation in construction.
- **Validated Impacts** – measurable outcomes: renovation cost reduction >30%, on-site waste/time reduction >35%, hazardous work reduction >50%, energy savings >70% (>2.94 GWh/year), GHG reductions ~1,029 tCO_{2eq}/year.

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[Click here for the project's website.](#)



An Index Proposal for Measuring Urban Resilience through Municipalities in Turkey: Turkey Urban Resilience Index (TURI)

Programme Name

TÜBİTAK 1001

Project Budget

1.884.400,00 ₺

Project Duration

2024 – 2026

Project Reference Number / Code

323K293

Priority Area



Resilience and Adaptation to Climate Change

Project Objectives

This project aims to create a national index that will measure, evaluate and rank urban resilience with a holistic perspective for municipalities, taking into account Türkiye's unique legal, political, cultural, social, demographic, economic, historical, geographical, social, and urbanization dynamics. The originality aspect of the project is that it will create a national index specific to Türkiye, taking into account the deficiencies of international organizations in measuring urban resilience.

Project Quote

This project develops Türkiye's first national Urban Resilience Index, tailored to the country's unique dynamics, providing municipalities with a holistic tool to measure, evaluate, and strengthen urban resilience.

Lead Partner Name

Karadeniz Technical University

Lead Partner Country

Türkiye

Project Activities

- Structuring the evaluation hierarchy,
- Creating the indicator hierarchy,
- Ranking the decision options,
- Determining the main indicator weight coefficients,
- Performing the TURI evaluation and rating, and
- Testing the TURI evaluation and rating system.

Target Groups/Beneficiaries

- Public Authorities

Main Outputs/Results

An urban resilience index for municipalities

Geographical Scope

Türkiye



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Archaeological Park in Urban Areas as a Tool for Local Sustainable Development – ArcheoDanube



Programme Name

Interreg Danube
Transnational Programme

Project Budget

2.157.540,00 €

Project Duration

2020 – 2022

Project Reference
Number / Code

-

Priority Area



Other: Cultural Heritage, Archeotourism

Project Objectives

ArcheoDanube **promotes archaeological parks in urban areas as tools for sustainable local development.** It aims to **preserve, valorize, and integrate cultural heritage** into city life, connect archaeological remains with modern urban contexts, and develop archeotourism as an engine of cultural and economic growth.

Lead Partner Name

Institute for the Protection of Cultural Heritage of Slovenia (ZVKDS)

Lead Partner Country

Slovenia

Other Partners

Bulgaria *2 | Romania *4 | Slovenia *2 | Hungary *3 | Croatia *2 | Czech Republic *2 | Austria | Bosnia and Herzegovina | Serbia *2 | Moldova *2

Project Activities

- Baseline study on laws, strategies, and practices in archaeological heritage
- Development of methodologies & guidance for LAPs (Local Archaeological Plans)
- Stakeholder group formation & workshops in partner cities
- Good practices catalogue of archaeological parks
- Pilot LAPs (e.g., Horizon Fortress in Balchik)
- Training courses, conferences, and think tank seminars
- Dissemination via brochures, signage, videos, and digital tools (ArcheoTales app, Archeo webspace)

Target Groups/Beneficiaries

- Local Authorities,
- Museums,
- Cultural Heritage Institutions,
- Researchers,
- Tourism Operators,
- Municipalities,
- Local Communities,
- Visitors/Tourists,
- Policymakers,
- Media Stakeholders

Main Outputs/Results

- Methodology for baseline studies and stakeholder involvement
- Concise baseline study + slide decks (translated in partner languages)
- Good practices catalogue of archaeological parks
- LAPs (Local Archaeological Plans) – e.g., Horizon Fortress in Balchik
- Pilot activities (brochures, signage, pilot videos in Balchik)
- ArcheoTales app & “yesterday-today-tomorrow” interactive tool
- Policy proposals to the European Commission on heritage preservation
- Strengthened regional cooperation in cultural heritage preservation and archeotourism

Geographical Scope

Danube region: Slovenia, Hungary, Romania, Croatia, Germany, Bulgaria, Czech Republic, Austria, Moldova, Bosnia-Herzegovina, Serbia

Project Quote

ArcheoDanube shows **how archaeological parks can connect the past with the present**, turning heritage into a driver of sustainable development and cultural tourism in the Danube region.

Remarks/Additional Notes

Project delivered **innovative tools** such as ArcheoTales and Archeo webspace. Pilot LAPs proved successful in **integrating heritage into urban environments**. Co-funded by ERDF, IPA, ENI, and Bulgarian Government.



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[Click here for the project's website.](#)



Artificial Intelligence-Based Energy Production Prediction Software for Canal-Type Hydroelectric Power Plants



Programme Name

TÜBİTAK 1812 BİGG

Project Budget

900.000,00 ₺

Project Duration

2024 – 2026

Project Reference Number / Code

2240590

Priority Area



Resilience and Adaptation to Climate Change



Low Carbon Economy



Other: Renewable Energy Optimization

Project Objectives

Primary objective of this project is to develop an AI-supported software system capable of estimating energy production 24 hours in advance for canal-type hydroelectric power plants (HEPPs). By integrating meteorological forecasts, real-time sensor data, and SCADA system outputs, the system will utilize deep learning algorithms to provide highly accurate and adaptive production forecasts. The **solution aims to optimize production planning, reduce energy imbalance costs, and ensure efficient water resource management.** Additionally, the system will be designed for seamless integration with the Epiaş platform to support real-time data submission and market compliance.

Lead Partner Name

TÜBİTAK

Lead Partner Country

Türkiye

Project Activities

- **Data Collection and Integration:** Aggregation of historical production data, real-time SCADA outputs, sensor measurements (e.g., water level, flow rate), and meteorological forecasts.
- **Model Development:** Design and training of deep learning models to analyze integrated data and predict energy production 24 hours in advance with high accuracy.
- **Software Development:** Development of a user-friendly, AI-supported software platform capable of real-time prediction, visualization, and automated reporting.
- **System Integration:** Seamless integration with Epiaş for automated submission of production forecasts in compliance with market regulations.
- **Pilot Testing and Validation:** Real-world deployment in selected canal-type HEPPs to validate prediction accuracy, model adaptability, and operational performance.

Target Groups/Beneficiaries

- Small and Medium-Sized Enterprises (SMEs)
- Energy Market Operators and Regulators
- AI Developers
- Public Authorities and Policy Makers,
- Environmental Stakeholders

Main Outputs/Results

- **AI-Based Prediction Software Platform:** A fully functional software system capable of forecasting energy production in canal-type HEPPs 24 hours in advance using deep learning and integrated data sources.
- **Integrated Data Infrastructure:** A harmonized data framework combining meteorological, sensor, and SCADA data for real-time analysis and decision support.
- **Pilot Implementation Report:** A detailed report documenting the deployment, performance, and validation results from pilot tests conducted at selected HEPP facilities.
- **Technical Documentation:** Comprehensive user manuals, system architecture reports, and model training documentation to support further development and scaling.
- **Epiaş Integration Module:** A validated module for automatic submission of production forecasts to the Epiaş system, ensuring regulatory compliance.
- **Training Materials and Workshops:** Educational content and sessions provided to HEPP operators for effective use and understanding of the platform.

Project Quote

By combining advanced AI with real-time hydrological and meteorological data, this project **empowers small-scale HEPPs to forecast energy production with precision—enhancing sustainability, reducing market risks, and contributing to a low-carbon energy future**

Remarks/Additional Notes

This project has been awarded the **"Seal of Excellence"** in recognition of its innovative integration of artificial intelligence and renewable energy forecasting. The project stands out with its use of deep learning for real-time production estimation, its seamless integration with national energy market systems (Epiaş), and its potential to significantly reduce energy imbalance costs while supporting Türkiye's transition to a low-carbon economy.

Geographical Scope

Project is implemented within Türkiye, with initial pilot applications in regions where canal-type hydroelectric power plants (HEPPs) are densely located—particularly in the Mediterranean, Black Sea, and Eastern Anatolia regions. These areas were selected due to their high potential for small-scale hydropower generation and the availability of relevant infrastructure for data integration and model validation. The developed system is designed to be scalable and adaptable for deployment across other regions in Türkiye and internationally.

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[Click here for the project's website.](#)



Assessing the Vulnerability of the Black Sea Marine Ecosystem to Human Pressures - ANEMONE



Programme Name

Joint Operational
Programme BSB

Project Budget

991.173,71 €

Project Duration

2018 – 2020

Project Reference Number / Code

676754-2

Priority Area



Resilience and Adaptation to Climate Change



Other: Marine Environmental Protection

Project Objectives

The ANEMONE project **aims to harmonize monitoring methodologies for biodiversity, eutrophication, contamination, and marine litter in the Black Sea**. It develops and applies joint protocols, supported by pilot studies in selected coastal areas. By **engaging local communities and promoting citizen science**, the project strengthens regional cooperation and supports better ecosystem management.

Lead Partner Name

National Institute for Marine Research and Development “Grigore Antipa” (NIMRD)

Lead Partner Country

Romania

Other Partners

Romania | Bulgaria | Türkiye *2 | Ukraine

Project Activities

- Monitoring and evaluation of biodiversity,
- Eutrophication,
- Contamination and marine litter;
- Pilot studies in coastal and open-sea areas;
- Citizen science campaigns and stakeholder engagement;
- Exchange of good practices among partner institutions.

Target Groups/Beneficiaries

- Research institutes and universities
- Environmental authorities and policy makers
- NGOs and civil society organizations
- Coastal communities and schools (through citizen science and awareness campaigns)
- Fisheries and seafood consumers (via food safety assessments)

Main Outputs/Results

- Harmonized **monitoring methodologies** for biodiversity, eutrophication, contamination and marine litter.
- **Joint scientific cruise and pilot studies** in selected Black Sea coastal areas.
- **Reports** on environmental status and seafood safety.
- GIS-based **decision-support tools** for ecosystem management.
- Citizen **science activities and awareness campaigns** across partner countries

Project Quote

ANEMONE strengthened **regional cooperation** for a healthier Black Sea by harmonizing monitoring, engaging citizens, and supporting resilience against climate change impacts.

Remarks/Additional Notes

Awarded as Best Project in the Healthy Marine and Coastal Ecosystems category (Black Sea Project Awards 2023).

[Click here for the Black Sea Maritime Agenda](#)

Innovative citizen science activities: 8 workshops in 4 countries with 350+ participants; 26 surveys; 64,703 litter items removed; 163 participants trained in cetacean monitoring; 2,000+ people involved.

[Click here for the Black Sea CBC](#)

[Click here for the Maritime Forum](#)

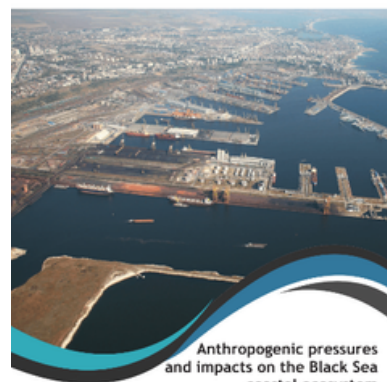
Strengthened cross-border collaboration: joint monitoring and scientific cruise with partners from Romania, Bulgaria, Türkiye, and Ukraine.

[Click here for the Black Sea CBC Joint Scientific Cruise](#)

[Click here for the TUDAV](#)

Geographical Scope

Black Sea Basin – project activities implemented in Romania, Bulgaria, Turkey, Ukraine, and Georgia



Common borders. Common solutions.

Name: Dr. Simona Mihăilă

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[Click here for the project's website.](#)



Biodiversity and Infrastructure Synergies and Opportunities for European Transport Networks (BISON)



Programme Name

Horizon 2020

Project Budget

3.563.652,50 €

Project Duration

2021 – 2023

Project Reference
Number / Code

101006661

Priority Area



Resilience and Adaptation to Climate Change



Other: Biodiversity

Project Objectives

- **Identify research and innovation needs** for biodiversity mainstreaming in transport infrastructure.
- **Detect the methods and materials** that can be used by different transport modes to mitigate pressure on biodiversity.
- **Support European Member States** to fulfil their regional and international commitments for sustainable development.
- **Develop collaboration among European Member States** to become political leaders on jointly addressing biodiversity and infrastructure challenges.

Lead Partner Name

CERTH

Lead Partner Country

Greece

Other Partners

Romania *3 | Poland *2 | Italy *2 | Denmark | France *14 | Germany *5 | Czech Republic *2 Spain *2 | Switzerland | Austria | Belgium *3 | Slovakia *3 | Israel | Sweden *2 | Ireland

Project Activities

The BISON project produced a Strategic Research and Deployment Agenda (SRDA). To build it, it integrated contributions from stakeholders from industry, transport authorities, academic sector, and environmental agencies. The objective was to identify multidisciplinary research needs based on the gaps that have been highlighted in relation to the current state of knowledge. The Strategic Research Agenda answers to the short to long term research questions as well as regional and pan-European challenges highlighted by the BISON project

Target Groups/Beneficiaries

- Industry
- Transport Authorities
- Academic Sector
- Environmental Agencies

Main Outputs/Results

- **Online handbook** "Good practice for mainstreaming biodiversity on transport"
- **Identification of Best Practice and Gaps and Barriers** to expand replicability and application of good and best practice to mainstream biodiversity and transport.
- **Research and Innovation Needs** Expressed by Stakeholders.
- **Application of BIM and other Tools** to Standardise Data Record and Management.
- Development and use of the **European Defragmentation Map**.
- **Status of national policy, legislation and implementation tools and recommendations** for the integration of the EU SGI into transport infrastructure development.
- **Effective transport infrastructure life cycle tools, processes and implementation barriers** for Green and Grey Infrastructure and recommendations for adaptations and deployment to different transport modes and / or regional clusters.
- Allocation of **innovative solutions** to future scenarios
- **Recommendations** for policy strategy harmonization.
- EU funding opportunities and proposals for cross sectoral topics.
- **Strategic Research and Deployment Agenda**

Project Quote

BISON EU project fosters sustainable transport innovation, significantly enhancing our region's mobility and environmental goals

Geographical Scope

Europe-wide



Name: Matina Loukea

Institution: Centre for Research and Technology Hellas

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Click here for the project's website.



BioReCer: Biological Resources Certifications Schemes



Programme Name

Horizon Europe

Project Budget

5.713.200,00 €

Project Duration

2022 – 2025

Project Reference
Number / Code

101060684

Priority Area



Other: Circular Economy

Project Objectives

- Establishment of new bio-based value chains promoting the **use of biological feedstocks as secondary raw materials to replace fossil-based resources.**
- **Increase industry and consumer acceptance** of bio-based value chains, including residual feedstock and waste.
- **Support the transition of linear value chains to a circular bio-based economy** that delivers substantial environmental and economic benefits.

Lead Partner Name

Fundacion Centro Gallego De Investigaciones Del Agua

Lead Partner Country

Spain

Other Partners

Greece | Spain *4 | Italy *5 | Sweden
Germany *2 | France

Project Activities

- Development of a **multidimensional assessment framework** for an aggregated analysis on the biological feedstocks and their associated supply chains;
- Creation of **BIORECER Innovation ecosystem living-lab** with a multi-agent approach, testing the framework in 4 bio-based systems supply chain cases of study, and
- Complementation of current certification schemes with new criteria for **certifying biological resources' sustainability, origin, and traceability, and ensure applicability** at EU and global scale.

Target Groups/Beneficiaries

- Primary Producers
- Smes
- Public Authorities
- Consumers/Citizens

Main Outputs/Results

- A **mapping** of the current European biomass flows.
- A **multidimensional impact assessment and traceability framework** (BioReCer framework) that incorporates sustainability and circularity assessments
- An integrated BioReCer framework into a established **biological certification scheme**.
- A secure and data-driven **BioReCer ICT tool (BIT)** where companies can register, promote their biomasses and evaluate them.

Project Quote

BioReCer outcomes foster certification of sustainability and circularity of biological resources promoting Europe's bio-based value chains and circular economy.

Geographical Scope

Europe



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[Click here for the project's website.](#)



Black Sea Joint Environmental Monitoring and Protection (ALERT)



Programme Name

Joint Operational
Programme BSB

Project Budget

723 472.24 €

Project Duration

2018 – 2020

Project Reference Number / Code

BSB-538 eMS code

Priority Area



Resilience and Adaptation to Climate Change



Other: Environmental Protection, Disaster Risk Management

Project Objectives

Project aimed to establish a long-lasting innovative cross-border link among Black Sea countries in the field of environmental protection and emergency management. Its main objectives included **creating an integrated environmental monitoring system, improving data availability and interoperability, increasing public awareness of environmental risks, and strengthening joint prevention and intervention capacities** in the case of natural disasters and hazards.

Lead Partner Name

Constanta County Council

Lead Partner Country

Romania

Other Partners

Bulgaria | Moldova

Project Activities

- Creation of cross-border **environmental monitoring system**
- **Development of risk and vulnerability assessments** for Black Sea transport networks (Varna & Burgas)
- Identification and adaptation of **best practices in disaster prevention**
- Organization of **10 training seminars & simulation exercises**
- Development of a **web-based platform and mobile app for environmental protection**
- Practical emergency **simulation** exercises
- **Public awareness campaigns and youth engagement** through mobile application

Target Groups/Beneficiaries

- Local Communities
- NGOs,
- Environmental Agencies,
- Youth, Volunteers,
- Municipalities (Varna, Burgas),
- Emergency Response Personnel,
- Decision Makers in Disaster Management

Main Outputs/Results

- Integrated environmental **monitoring system**
- **Environmental protection management plan**
- **Risk/hazard analysis** for Bulgarian Black Sea coast
- **Transferability study of 30+ best practices** in disaster prevention
- **10 seminars + simulated training** for authorities and volunteers
- **Capacity analysis** of municipalities (Varna & Burgas)
- **Mobile app for youth + web platform** for environmental protection
- Practical cross-border emergency **simulation** exercise

Project Quote

ALERT **strengthened cross-border cooperation for environmental monitoring and disaster risk prevention**, helping Black Sea communities to become more resilient and better prepared for natural hazards.

Geographical Scope

Romania (Constanța), Bulgaria (Varna, Burgas), Republic of Moldova (Ungheni) – wider Black Sea Basin relevance

Remarks/Additional Notes

- Combined **prevention, protection, and intervention** measures
- Strong emphasis on **youth engagement** via mobile app
- Introduced **innovative use** of cross-border decision support systems
- **Supported interoperability** of data and coordinated risk management.



Name: Constanta County Council

Institution: Constanta County Council

E-mail address: cjc@cjc.ro

[Click here for the project's website.](#)



Blue Culture Technology Excellence Hubs in EU Widening Member States - BCThubs



Programme Name

Horizon Europe

Project Budget

4.997.562,50 €

Project Duration

2023 – 2027

Project Reference
Number / Code

101087146

Priority Area



Blue Economy

Project Objectives

Project aims to strengthen regional capacity and cross-border collaboration in Blue Circular Technologies (BCT) by fostering innovation, investment, and outreach. It will establish BCT Excellence Hubs in Greece, Malta, and Bulgaria, while also preparing the ground for the creation of an EU-wide BCT Cluster. To guide the operation of the Hubs, a joint **cross-border Research and Innovation (R&I) Strategy** will be developed, supported by an Investment Strategy and Plan for its implementation. The project will also implement innovative R&I prototype solutions critical for Ultra-Wide Circular Hubs (UWCH) in the participating regions, together with the design and planning of new pilots and demonstration activities. Finally, cohesion and outreach actions will enhance visibility, stakeholder engagement, and long-term sustainability.

Lead Partner Name

Region of Thessaly

Lead Partner Country

Greece

Other Partners

Greece *6 | Bulgaria *3 | Italy *2 | Malta *3
Croatia

Project Activities

- Establishment of Blue Culture Technology (BCT) **Excellence Hubs and EU-wide BCT Cluster**
- Development of a **cross-border joint R&I Strategy** for the Hubs' operation
- Preparation of an **Investment Strategy & Plan** for the implementation of the joint R&I Strategy
- Implementation of specific **innovative R&I prototype solutions**, critical for UWCH in the regions
- Design and planning of **new pilots and demonstrations**

Target Groups/Beneficiaries

- Researchers
- Academia
- Investors in Blue Economy
- Public authorities

Main Outputs/Results

Three BCT Hubs permanently established in Greece, Bulgaria, and Malta, each supported by a jointly developed R&I Strategy and Action Plan with four main pillars, and further specialized through an Investment Strategy tailored to each Hub. The solution includes advanced **3D/4D Reconstruction and Digital Terrain Models (DTMs)** in two **Ultra-Wide Circular Hub (UWCH)** sites in Greece and Bulgaria, complemented by high use of electro-resistivity and sediment coring mechatronic tools in two UWCH sites in the Black Sea. It also integrates **TRL6** uptake of **VR technologies** for remote accessibility to UWCH sites in Greece and Malta, **TRL5** demonstrations of augmented diving in two UWCH sites in Greece and Malta, and **TRL5** demonstrations of underwater health and safety services in two UWCH sites in Malta and Italy (Year 1). Finally, the solution delivers a **roadmap** adopted by three EU regions, analyzing at least **four milestones** for the development of three new BCT Hubs.

Project Quote

Widening the Big Blue Horizon.

Remarks/Additional Notes

The project already includes Black Sea in its geographical scope via the Bulgarian BCT hub.

Geographical Scope

Thessaly, Black Sea, Malta and Gozo island



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[Click here for the project's website.](#)



Bluebiochain: Novel Biorefinery Supply Chains For Wastewater Valorization And Production Of High Market Value Bio Products Using Microalgae



Programme Name

Horizon 2020

Project Budget

1.310.000,00 €

Project Duration

2021 – 2024

Project Reference
Number / Code

ID 31 BlueBioChain

Priority Area



Low Carbon Economy



Other: Circular economy, wastewater valorisation

Project Objectives

Bridging the gap along the blue bioeconomy value chain, from biomass to products and markets and consumers addressing three major global challenges of the future; **sustainable waste management, tackling water scarcity and lack of food** for the growing global population.

Lead Partner Name

Hellenic Agricultural Organization, Demeter

Lead Partner Country

Greece

Other Partners

Greece *2 | Denmark *2 | Belgium | Malta
Iceland

Project Activities

- **Technology development** for microalgae cultivation in wastewater
- **Production** of high-added value products
- Model based **process optimization**
- **Food safety and security**
- **Sustainability, social impact and traceability**

Target Groups/Beneficiaries

- Research Community
- Industry (Food, Aquaculture, Cosmeceutical)
- Waste And Water Management Companies

Main Outputs/Results

- Concrete deliverables, outcomes, and results of the project (e.g., **reports, trainings, pilot actions, platforms**)
- **BlueBioChain e-marketplace** is a web-based tool that allows (i) traceability control along the blue bioeconomy value chain, (ii) connection and cooperation of interested stakeholders aiming to best matches identification and establish profitable agreements between them, and (iii) deciphering, organization, and re-invention of the blue bioeconomy supply chain network
- **BlueBioChain sustainability assessment framework** is a holistic assessment methodology that covers all environmental, technical, economic and social aspects by combining both the sustainability triple-bottom line theory and life cycle thinking approaches. The methodology seeks to evaluate the performance of a biorefinery system in comparison to conventional wastewater treatment processes and production of high value market bio-products from a sustainability point of view.
- **An intelligent wastewater valorization system** using microalgae for the pilot production of 3 categories of high market value products, namely (i) cosmeceuticals (skin cream), (ii) food additives (food coloring agents for novel, convenient meat, and dairy analogues) and (iii) zero-waste aquaculture farms (aquafeed for fish/arthropods feed)

Project Quote

A holistic biorefinery platform bridging the gap along the blue bioeconomy value chain, from biomass to products, markets and consumers, addressing three major global challenges of the future; sustainable waste management, tackling water scarcity and lack of food for the growing global population.

Geographical Scope

Belgium, Denmark, Greece, Iceland, and Malta



Name: Dr. George F. Banias

Institution: CERTH / IBO

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[Click here for the project's website.](#)



Brăila Bridge — Danube Suspension Bridge (Golden Gate of Romania)



Programme Name

Large Infrastructure Operational
Programme (LIOP)

Project Budget

500.000.000,00 €

Project Duration

2018 – 2023

Project Reference Number / Code

LIOP Transport Axis

Priority Area



Low Carbon Economy



Blue Economy



Resilience and Adaptation to Climate Change

Project Objectives

The Brăila Bridge project aimed to construct one of Europe's largest suspension bridges, enhancing connectivity between Brăila, Tulcea, and Galați counties, and integrating the region into the TEN-T network. The project improved cross-border mobility and supported regional development by providing resilient infrastructure. It also facilitated transfer of technology through the adoption of advanced engineering solutions in suspension bridge construction, introducing Japanese and Italian expertise to Romania.

Lead Partner Name

Compania Națională de Administrare a
Infrastructurii Rutiere (CNAIR)

Lead Partner Country

Romania

Other Partners

Romania | Italy | Japan |

Project Activities

- **Design and construction** of a 1,975 m long suspension bridge over the Danube.
- Integration into **TEN-T network** to enhance cross-border transport.
- **Knowledge and technology transfer** from Japanese and Italian partners.
- Implementation of **structural health monitoring systems**.
- Development of **access roads and supporting infrastructure**.

Target Groups/Beneficiaries

- Regional Communities,
- Transport Operators,
- Logistics Companies,
- Cross-Border Trade Stakeholders,
- Local And National Authorities.

Main Outputs/Results

- **Decision-support tools and guidelines** for metropolitan climate resilience.
- **Integrated adaptation strategies** for selected regions.
- Pilot actions applying **nature-based solutions**.
- **Enhanced collaboration** between science, policy, and citizens.
- **Transferable models** for other metropolitan areas across Europe.

Project Quote

The Brăila Bridge is more than an infrastructure project – it is a **symbol of innovation, resilience, and European integration**.

Geographical Scope

Romania (Brăila–Tulcea–Galați region), integrated into European TEN-T transport corridor.

Remarks/Additional Notes

- **Largest suspension bridge** in Central and Eastern Europe.
- Inaugurated in July 2023, nicknamed “**Golden Gate of Romania**.”
- Significant **transfer of technology and expertise** from Japanese and Italian partners.
- Includes **advanced monitoring systems** ensuring long-term resilience of the infrastructure.



Institution: Compania Națională de Administrare a Infrastructurii Rutiere (CNAIR), Romania

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Click here for the project's website.



Building Disaster and Climate Resilience Program – Romania (P166303)

Programme Name

RIA - H2020-ISIB-2015-2

Project Budget

3,999,998,75 €

Project Duration

2016 – 2020

Project Reference Number / Code

676754-2

Priority Area



Resilience and Adaptation to Climate Change

Project Objectives

Program strengthens Romania's institutional and legal framework for **disaster risk management and climate resilience**. It ensures rapid access to financing in case of disaster through the Cat-DDO mechanism. The project improves **preparedness for floods, droughts, landslides, and earthquakes, while supporting fiscal resilience and climate adaptation reforms**. It also promotes technology transfer through modern monitoring and early warning systems.

Lead Partner Name

Ministry of Finance, Romania

Lead Partner Country

Romania

Other Partners

World Bank | Regional/local Authorities
| Emergency Management Agencies

Project Activities

- Development of **national and regional strategies** for disaster risk reduction and climate adaptation.
- **Policy and legal reforms** to strengthen institutional resilience.
- Establishment of **early warning and monitoring systems** for natural hazards.
- **Training programs and capacity building** for public authorities.
- **Technology transfer** in GIS, hydrological, and meteorological systems.
- **Public awareness and stakeholder engagement campaigns**.

Target Groups/Beneficiaries

- Central And Local Authorities,
- Emergency Management Agencies,
- Vulnerable Communities,
- NGOs, Civil Society,
- Research Institutions.

Main Outputs/Results

- **Strengthened national disaster and climate resilience framework.**
- **Fiscal buffer** through Cat-DDO instrument ensuring immediate funds after disasters.
- **Improved hazard monitoring and early warning systems.**
- **Institutional reforms and capacity building** at national and local levels.
- Enhanced **knowledge and technology transfer** across institutions.

Project Quote

This program lays the foundation for Romania's long-term resilience by linking fiscal stability, disaster preparedness, and climate adaptation

Geographical Scope

Nationwide – Romania (with focus on regions vulnerable to floods, droughts, earthquakes, and landslides).

Remarks/Additional Notes

- Supported by World Bank under Project ID P166303.
- Provides immediate liquidity in case of disasters through Cat-DDO.
- Aligns with Romania's Climate Change Strategy 2022–2030.
- Integrates cross-sectoral reforms and technology transfer in monitoring and disaster management systems.



Institution: Ministry of Finance, Romania

E-mail address: informatii@mfinante.gov.ro

Institution: Ministry of Environment, Water and Forests, Romania

E-mail address: comunicare@mmediu.ro

[Click here for the project's website.](#)



CABIT – E-Cargo Bike Riders Initial Training



Programme Name

Erasmus+ KA2

Project Budget

186.533,00 €

Project Duration

2020 – 2022

Project Reference Number / Code

2020-1-UK01-KA202-079675

Priority Area



Other: Sustainable Urban Mobility, Green Logistics

Project Objectives

Project aims to support municipalities, businesses and social enterprises which use or plan to use e-cargo bikes for short-distance freight/logistics, by developing an initial training programme for riders so they can operate e-cargo bikes safely, competently, and with awareness of the challenges in urban environments. It also aims to standardize training where none exists, reduce environmental impacts, and promote sustainable transport.

Lead Partner Name

Accentuate (North East) Limited

Lead Partner Country

United Kingdom

Other Partners

Romania | Austria | Italy | Greece | Bulgaria | Spain

Project Activities

- **Identification of the knowledge, skills and competences** required by e-cargo bike riders across partner countries.
- Development and testing of a **training toolkit** (manual, interactive course modules) for riders and for enterprises/municipalities using or planning to use e-cargo bikes.
- Implementation of **pilot / initial training sessions** to test the toolkit.
- **Dissemination** of tools, guidelines, and raising stakeholder awareness in partner countries.
- Possibly establishing standards or reference frameworks for rider competence in e-cargo bike operations

Main Outputs/Results

- A **"CABIT Toolkit"**, which includes the interactive initial training course for new users, manual for trainers and learners, advice for carrying out operations using e-cargo bikes.
- Training resources accessible via an **e-learning platform / apps**.
- Improved competence and safety among riders who completed the training.
- **Support** for companies & municipalities in establishing safe, sustainable e-cargo bike operations.
- Contribution towards **reducing CO₂ emissions, noise, and air pollution** in urban freight logistics.

Project Quote

El programa Erasmus+ ha cofinanciado el proyecto CABIT... desarrollado un programa de formación inicial para personal de reparto de mercancías con bicicleta eléctrica de toda Europa." ("The Erasmus+ programme has co-financed CABIT... a training programme for electric cargo bike delivery personnel across Europe.")



Target Groups/Beneficiaries

- E-Cargo Bike Riders;
- Companies, Municipalities Or Social Enterprises Using Or Planning To Use E-Cargo Bikes;
- Trainers/Educators In Logistics And Mobility;
- Organisations Interested In Sustainable Freight;
- Policy-Makers In Urban Transport And Environmental Planning.

Remarks/Additional Notes

Training materials are freely available as a toolkit.

Emphasis on **safety, environmental impact, and standardizing rider competence** in a domain with no or few existing regulations.

The project helps support the shift to **greener urban logistics**.

Geographical Scope

United Kingdom, Spain, Austria, Italy, Greece, Bulgaria, Romania (partner countries) – EU-wide relevance for adoption of e-cargo bike rider training.

Name: Development & Innovation
Projects Department

Institution: Accentuate (North East) Limited,
United Kingdom

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[Click here for the project's website.](#)



Cleaner Ships with On-board Carbon Capture & Storage- CLOCCS



CLOCCS

Cleaner ships with On-board
Carbon Capture & Storage

Programme Name

Corporate-Funded
Research Project

Project Budget

347.600,00 €

Project Duration

2023 – 2026

Project Reference Number / Code

-

Lead Partner Name

CLEOS

Lead Partner Country

Greece

Other Partners

Greece *2

Priority Area



Resilience and Adaptation to Climate Change



Low Carbon Economy

Project Objectives

Design, manufacture, integrate on-board and test a first-of- a-kind pilot carbon capture based on the membrane gas absorption technology (MGA) and assess its potential for full-scale installation and commercial exploitation

Target Groups/Beneficiaries

- SMEs & Companies of the shipping sector
- Researchers
- Universities

Project Activities

- Lab-scale units for independent evaluation of complex system parameters under realistic conditions, definition of key performance metrics for scale-up, preliminary definition of control strategies and quantification of off- design operation
- **Modelling of the MGA performance**
- **Concept design** of on-board pilot and feasibility/conceptual design of on-board installation
- **Detailed engineering design, manufacture, on-shore testing, procurement and on-board installation** of pilot unit in collaboration with third partners
- On-board **measurement campaign**
- Contribution in **techno-economic assessment** of full- scale unit towards commercialization

Main Outputs/Results

- Technical Report on the 1st scale-up and testing of the laboratory MGA unit under realistic conditions
- On-board installation and testing of the MGA pilot unit

Project Quote

- **CLOCCS: a next-Generation Onboard Carbon Capture project.** CLEOS and CERTH are pioneering advanced membrane-based Onboard Carbon Capture technology.
- This compact system integrates onboard **heavy-duty diesel engines, optimizing emissions control with reduced solvent needs and enhanced process precision.**

Geographical Scope

Greece

Name: Dr Akrivi Asimakopoulou |
Chemical Engineer, PhD
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Climate Resilient and Environmentally Sustainable Transport Infrastructure, with a Focus on Inland Waterways – CRISTAL



Programme Name

Horizon Europe

Project Budget

6.837.452,50 €

Project Duration

2022 – 2025

Project Reference
Number / Code

101069838

Priority Area



Resilience and Adaptation to Climate Change

Project Objectives

Key objective of the CRISTAL project is to increase the share of freight transport on inland water transport (IWT) by a minimum of 20% and to demonstrate on its three pilot sites (Italy, Poland and France) strategies to improve reliability by 80%. CRISTAL project will assure IWT capacity at 50% even during extreme weather events.

Target Groups/Beneficiaries

- Shippers
- Barge Operators
- Logistics Service Providers (Including 3PL)
- Infrastructure Managers
- Public Authorities

Lead Partner Name

Łukasiewicz - Poznań Institute of Technology

Lead Partner Country

Poland

Other Partners

Greece | France | Italy *6 | Belgium *2
Germany | Poland | Hungary | Czech
Republic | United Kingdom

Project Activities

- **Pilot sites in three countries:** Vistula & Oder (Poland), Po (Italy), Seine & Moselle (France)
- **Implementation of sensors systems** for monitoring river infrastructure health to support early alerting and predictive maintenance
- **Development of digital systems** for infrastructure health and navigability assessment (**Digital Twins**) and for operational decision support and resilience (Synchromodal Corridor Management System - SCMS)
- Development of **Governance and Business models** for enhancing Inland Waterways Transport & Logistic (IWT&L) network systems management according to climate change mitigation and resilience management strategies

Main Outputs/Results

Developed solution

Synchromodal Corridor Management System (SCMS): a system (platform) for collecting and pushing disruptions-related information towards operational stakeholders, using this information also for supporting the planning & re-planning of operations, providing alternatives. It also collects data to support decision and policy-making at regional level.

Project Quote

We focus on the development of **Inland Waterway Transport (IWT)** and its infrastructure for a climate resilient and environmentally sustainable transport system

Geographical Scope

Navigable rivers in EU

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[Click here for the project's website.](#)



Climate Resilient Development Pathways in Metropolitan Regions of Europe CARMINE



CARMINE

Climate Resilient Development Pathways in Metropolitan Regions of Europe

Programme Name

Horizon Europe

Project Budget

5.900.000,00 €

Project Duration

2024 – 2027

Project Reference
Number / Code

101137851

Priority Area



Resilience and Adaptation to Climate Change



Blue Economy

Project Objectives

CARMINE aims to co-develop climate-resilient pathways for metropolitan regions across Europe by integrating scientific knowledge, governance frameworks, and citizen engagement. The project provides **tools and guidelines to help cities** adapt to climate hazards, including floods, heatwaves, and storms. It promotes nature-based solutions, policy innovation, and collaborative governance, while ensuring that adaptation measures are socially inclusive and economically sustainable.

Lead Partner Name

National Meteorological Administration

Lead Partner Country

Romania

Other Partners

Universities | Research Institutes |
Metropolitan Authorities | NGOs From
Finland Germany | Spain | Other EU
Countries

Project Activities

- **Co-design and implementation of climate-resilient development pathways** in eight European metropolitan regions.
- Development of **decision-support tools** for local governments.
- **Testing and demonstration of nature-based solutions.**
- Cross-border **exchange of knowledge and good practices.**
- **Capacity building, training, and policy dialogue** with stakeholders.

Target Groups/Beneficiaries

- Metropolitan And Local Governments
- Urban Planners
- Researchers
- Ngos
- Citizens, And Communities Exposed To Climate Risks

Main Outputs/Results

- **Decision-support tools and guidelines** for metropolitan climate resilience.
- **Integrated adaptation strategies** for selected regions.
- Pilot actions applying **nature-based solutions**.
- **Enhanced collaboration** between science, policy, and citizens.
- **Transferable models** for other metropolitan areas across Europe.

Project Quote

CARMINE helps European metropolitan regions become climate-resilient by combining science, governance, and citizen action.

Remarks/Additional Notes

- Funded under the EU Mission on Adaptation to Climate Change.
- Led by a Romanian institution (National Meteorological Administration).
- Strong emphasis on nature-based solutions and co-creation with citizens.
- Contributes directly to the EU's 2030 climate resilience targets.

Geographical Scope

Eight European metropolitan regions (including Romania), with results transferable to other EU areas.



Institution: National Meteorological Administration (Romania) – Project Coordination Unit

E-mail address: contact@meteoromania.ro

[Click here for the project's website.](#)



Cross-Border Actions for Prevention of Disasters & Climate Change



Programme Name

Interreg VI-A Greece-
Cyprus

Project Budget

1.854.993,25 €

Project Duration

2025 – 2025

Project Reference Number / Code

6006516

Lead Partner Name

Centre For Research & Technology Hellas

Lead Partner Country

Greece

Other Partners

Greece | Cyprus *2

Priority Area



Resilience and Adaptation to Climate Change

Project Objectives

Prevent-DisCC project aims to develop a new joint strategy for the prevention of future forest fires and natural disasters. It seeks to strengthen and enhance the technological and operational resources of the local authorities participating in the consortium. At the same time, the project focuses on **creating models for predicting forest fires and natural disasters**, as well as **raising awareness and supporting the adaptation** of local communities to the effects of climate change.

Geographical Scope

Cross-border Region of Greece and Cyprus

Project Quote

Throughout history, humans have had to struggle with nature in order to survive. In this century, they have begun to realize that in order to survive, they must protect it.

Target Groups/Beneficiaries

- Local & Regional Authorities
- Volunteer rescue and forest firefighting teams.
- Environmental NGOs
- Academic and Research Institutions
- Local Societies

Project Activities

Field Research & Data Collection

- Pilot field research in forest areas using robotic systems and unmanned aerial vehicles (drones) to monitor: Fuel accumulation - Drought risk
- Utilize observation data from the Copernicus Sentinel-2 satellite system for enhanced accuracy and data completeness.

Prediction Models & Scenario Development:

- Design and implement predictive models to assess wildfire risk and climate-related threats.
- Develop future scenarios for effective forest management and emergency response planning.

Training & Capacity Building:

Conduct training seminars for local government officials on:

- Recording and analyzing climate change impact data
- Integrating data into planning and decision-making

Organize field training seminars for:

- Volunteer rescue teams
- Forest firefighting crews - to enhance skills in prevention, early detection, and rapid response.

Public Engagement & Awareness

- Establish interactive educational and informational facilities to raise public awareness of forest fire risks and climate change.
- Develop participatory prevention plans and self-protection protocols to empower local communities.
- Active citizen participation through crowdsourcing (e.g., reporting fire outbreaks, risk signs, or illegal activities)

Main Outputs/Results

- Development of a **modeling system** for predicting drought and fire risk in the two partner regions.
- **Training seminars** for local government officials and stakeholders on data collection, interpretation, and analysis.
- **Digital mapping of forest areas** in the municipalities of Rhodes and Kourion to record data on biomass indicators, including forest cover density, disease detection, and humidity levels.
- Establishment of an **early warning system** for timely detection and response to fire and drought risks.
- **Creation of educational materials** to raise awareness and encourage greater participation of local communities in prevention plans.
- Implementation of a **field training system for volunteer rescue and forest firefighting teams** to strengthen operational capacity.
- 2 joint developed solutions:
- The creation of a **Modeling and Scenario Development System** for drought and wildfire risk forecasting.
- The development of a «**Joint Prevention Strategy**» for the Greece-Cyprus Cross-Border Region.

Name: Dr. Vasilios Kappatos

Institution: CERTH

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Danube Region Research and Innovation Fund – Coordination and Support Action - DANUBE-INCO.NET



Programme Name

Horizon 2020

Project Budget

3.250.000,00 €

Project Duration

2017 – 2017

Project Reference
Number / Code

613260

Priority Area



Low Carbon Economy



Other: Innovation & Technology Transfer

Project Objectives

DANUBE-INCO.NET supported research and innovation cooperation in the Danube Region, aligning national priorities with the Horizon 2020 framework. The project promoted **technology transfer and smart specialisation (RIS3) across the Danube countries**. It strengthened links between universities, SMEs, and regional authorities, facilitating joint actions in renewable energy, bioeconomy, and eco-innovation. The project provided policy **recommendations and platforms** for **long-term innovation cooperation** in the region.

Lead Partner Name

National Authority for Scientific Research and Innovation

Lead Partner Country

Romania

Other Partners

Research Institutes | Innovation Agencies | Ministries from 19 Countries in the Danube Region (Austria, Germany, Hungary, Slovakia, Serbia, Croatia, Bulgaria, etc.)

Project Activities

- Establishment of **networks** for Technology Transfer Offices (TTOs).
- Support for **Smart Specialisation Strategies (RIS3)** in Danube countries.
- Pilot initiatives in **renewable energy, bioeconomy, and eco-innovation**.
- Organisation of **policy dialogue workshops and conferences**.
- Dissemination of **best practices and knowledge exchange**.

Target Groups/Beneficiaries

- Universities
- Research Centres
- SMEs
- Policy-Makers
- Technology Transfer Offices
- Regional Development Agencies

Main Outputs/Results

- **Stronger cooperation** in R&I in the Danube Region.
- **Enhanced integration** of RIS3 and Horizon 2020 priorities.
- Pilot projects demonstrating **TT in low carbon and bioeconomy sectors**.
- Increased **visibility** of the Danube Region in EU research policy.
- **Policy recommendations** for sustainable innovation and technology transfer.

Project Quote

DANUBE-INCO.NET fostered cooperation and technology transfer in the Danube Region, building bridges between science, policy, and business.

Remarks/Additional Notes

- Funded under Horizon 2020 as a Coordination and Support Action.
- One of the first large-scale EU projects coordinated by Romania in the Danube Region.
- Contributed directly to EUSDR Priority Areas PA7 (Knowledge Society) and PA8 (Competitiveness).
- Provided lasting models for innovation cooperation and TT in the Danube Region.

Geographical Scope

Danube Region (19 countries including Romania, Austria, Germany, Hungary, Slovakia, Serbia, Croatia, Bulgaria, etc.).

Institution: National Authority for Scientific Research and Innovation (ANCSI), Romania

E-mail address: secretariat@ancs.ro

[Click here for the project's website.](#)



Danube Soya - Sustainable Non-GMO Soya Production in the Danube Region (DSR)



Programme Name

Danube Transnational Programme

Project Budget

3,500.000,00 €

Project Duration

2014 – 2019

Project Reference Number / Code

Danube Soya Initiative

Priority Area



Low Carbon Economy



Blue Economy

Project Objectives

The Danube Soya project promoted sustainable, GMO-free soybean cultivation and value chains across the Danube Region, including Romania. It aimed to increase protein self-sufficiency in Europe while reducing environmental impacts and deforestation linked to imported soya. Romanian pilot activities focused on **technology transfer for non-GMO soybean production, certification schemes, and farmer training**. The project also supported knowledge exchange between farmers, universities, and industry.

Lead Partner Name

Danube Soya Association / University of Agricultural Sciences and Veterinary Medicine

Lead Partner Country

Austria | Romania

Other Partners

Austria | Germany | Romania | Serbia
Danube Countries

Project Activities

- **Pilot cultivation** of certified non-GMO soybean varieties in Romania.
- **Farmer training and knowledge transfer workshops.**
- Development of **certification and labeling schemes.**
- Building **sustainable value chains** linking farmers to processors and retailers.
- **Policy dialogue** to promote sustainable agriculture in the Danube Region.

Target Groups/Beneficiaries

- Farmers
- Cooperatives
- Agricultural Universities
- NGOs
- Processors
- Retailers
- Consumers

Main Outputs/Results

- Expansion of non-GMO soybean production in Romania and neighboring countries.
- Certified Danube Soya label adopted in the region.
- Strengthened farmer knowledge and adoption of sustainable practices.
- Reduced carbon footprint through regional protein production.
- Technology transfer from research institutions to farmers.

Project Quote

Danube Soya builds sustainable value chains by connecting farmers, science, and markets for a GMO-free future



Geographical Scope

Danube Region (Romania, Austria, Germany, Serbia, Hungary, and other participating countries).

Remarks/Additional Notes

- Recognized as a model for **sustainable protein transition** in Europe.
- Romanian farmers were among the first adopters of Danube Soya certification.
- **Strong technology transfer component:** field trials, farmer training, and adoption of non-GMO certified seeds.
- Contributes to EU's **Green Deal objectives and Farm to Fork Strategy**.

Institution: University of Agricultural Sciences and Veterinary Medicine Cluj-Napoca, Romania

E-mail: rectorat@usamvcluj.ro

[Click here for the project's website.](#)



Developing Optimal and Open Research Support for the Black Sea - DOORS



Programme Name

Horizon 2020

Project Budget

9.000.000,00 €

Project Duration

2021 – 2025

Project Reference
Number / Code

101000518

Priority Area



Resilience and Adaptation to Climate Change



Blue Economy

Project Objectives

DOORS aims to unify marine research efforts for the Black Sea by creating a framework for sustainable blue economy growth and environmental protection. It develops an open-access knowledge base to support decision-making and integrates scientific, policy, industry, and societal actors. The project **strengthens regional cooperation, promotes citizen science, and enhances climate resilience** of Black Sea communities.

Lead Partner Name

National Institute for Marine Geology and Geoecology – GeoEcoMar

Lead Partner Country

Romania

Other Partners

37 Partners from 22 Countries | Including Research Institutes | Universities | NGOs | Industry Representatives (e.g., EMB, EuroGOOS, Black Sea Universities Network)

Project Activities

- Development of a **Black Sea Virtual Knowledge Platform** for open access to data.
- Establishment of pilot projects on ecosystem monitoring, **marine litter, and climate change adaptation.**
- **Engagement of stakeholders** through living labs and citizen science.
- **Support for policy development** aligned with EU Mission “Restore Our Oceans and Waters.”
- **Training, capacity building, and exchange of best practices** across the region.

Target Groups/Beneficiaries

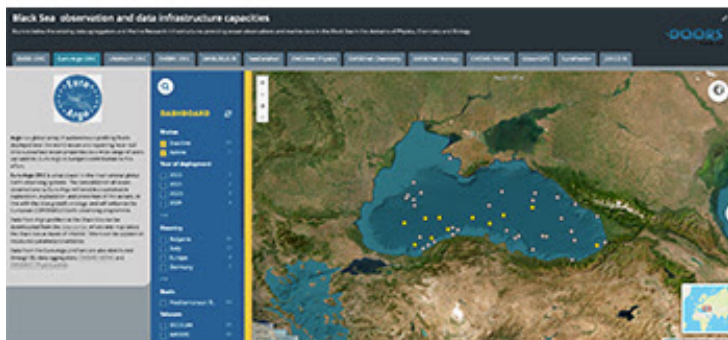
- Policy-Makers
- Research Institutions
- Universities
- Local Communities
- Industry (Fisheries, Shipping, Tourism)
- NGOs
- Civil Society

Main Outputs/Results

- **Black Sea Virtual Knowledge Platform.**
- **Regional coordination** of marine data and research infrastructures.
- **Pilot actions** for ecosystem restoration and pollution reduction.
- **Stronger** science - policy - industry - society interface.
- **Enhanced cooperation** among Black Sea countries.

Project Quote

DOORS opens new opportunities for sustainable use of the Black Sea by connecting science, policy, and society



Remarks/Additional Notes

- Part of the EU Mission "Restore Our Ocean and Waters by 2030."
- One of the largest EU-funded projects for the Black Sea, coordinated from Romania.
- Demonstrates leadership in regional cooperation and open science.

Geographical Scope

Pan-Black Sea Region with EU and international collaboration.

Name: Dr. Adrian Stănică

Institution: National Institute for Marine Geology and Geoecology (GeoEcoMar), Romania

E-mail: office@geoecomar.ro

Click here for the project's website.



Development of an Energy-Autonomous Mobile Electrodialysis Unit for the Treatment of Groundwater - AQUASOLE



Programme Name

ESPA 2021-2027 Program

Project Budget

3.249.840,00 €

Project Duration

2021 – 2025

Project Reference
Number / Code

0083181

Lead Partner Name

TEMAK AETE

Lead Partner Country

Greece

Other Partners

Greece *3

Priority Area



Resilience and Adaptation to Climate Change



Low Carbon Economy



Other: Water Management and Zero Liquid Discharge

Main Outputs/Results

AquaSole system design (integrated ED/PV/batteries system) and a modeling framework for system optimization

Project Quote

Leveraging the **circular applications of the electrodialysis technology** for multiple beneficiaries (citizens, farmers) with the integration of novel selective materials and renewable energies sources

Project Activities

- Defining the industrial requirements and specifications for the **innovative AquaSole system**
- The **optimisation of the individual units of the system (ED array, PV panels)** and their integrated combination
- Carrying out **tests in a laboratory environment (TRL4)** to obtain experimental proof-of-concept data
- **Validate the system in a relevant environment (TRL5)** towards the optimisation of its operating performance
- **Demonstration of the operation of an ED/PV prototype pilot) system** in an operational environment
- **Techno-economic evaluation** of the proposed technology

Target Groups/Beneficiaries

- TEMAK AETE (Greek SME)
- Water Utilities
- Municipalities
- Citizens

Project Objectives

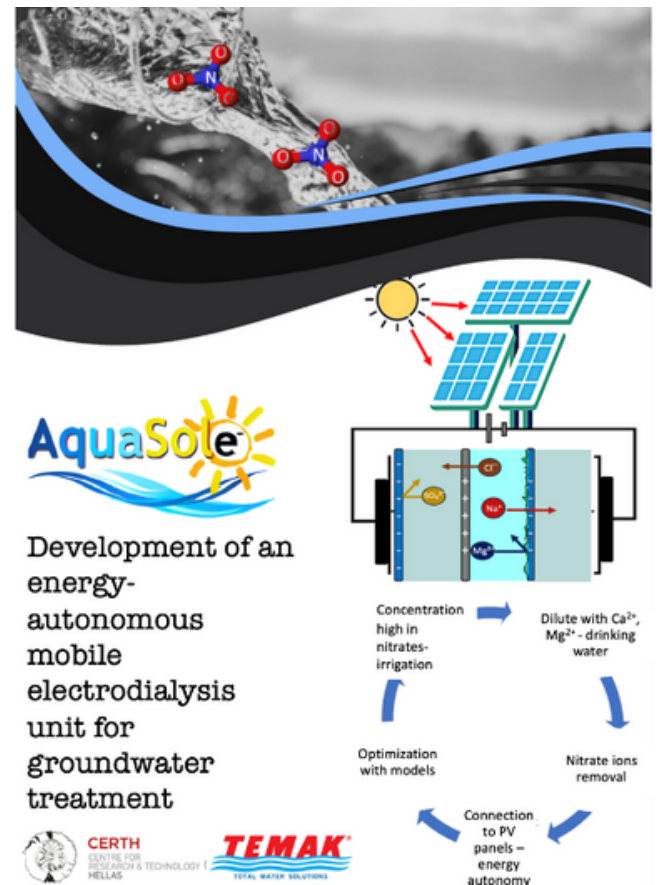
- AquaSole project developed **an alternative system for the softening of groundwater and the removal of nitrate ions, and demonstrate it in a operational environment (TRL7) in order to make it suitable for potable use.**
- System is based on **electrodialysis (ED) technology**, uses selective ion exchange membranes, is energy self-sufficient (powered by solar energy via a photovoltaic panel system – PV), and has zero wastewater footprint as the two liquid streams generated by the process (dilute and concentrate) can be used directly as drinking water (high purity water) and for irrigation/aquifer recharge.
- Project proposed also a modeling framework based on **Artificial Neural Networks (ANN)** for the integrated design and dynamic optimization of the renewable ED system, as well reliable methods for the effective implementation of environmental policy by the end users of the AquaSole technology, with positive economic and social impacts.

Geographical Scope

Region of Central Macedonia, Greece

Remarks/Additional Notes

Collaboration with an interested municipality and the respective local water utility for a detailed techno-economic assessment of an upscaled AquaSole system for future application



Name: Dr. Konstantinos Plakas

Institution: NRRE/CPERI/CERTH

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DigiMedFor — Digital Tools and Technology Systems for the Sustainable Management of Mediterranean Forest Resources



Funded by
the European Union

Programme Name

Horizon Europe

Project Budget

6.621.797,50 €

Project Duration

2023 – 2026

Project Reference
Number / Code

101081928

Priority Area



Resilience and Adaptation to Climate Change



Low Carbon Economy

Project Objectives

DigiMedFor aims to modernize the Mediterranean forest-wood supply chain through the integration of advanced digital technologies. A key objective is the insertion of robotized forest inventory methods using AI, remote sensing, and digital twin modelling. These will promote the increase of forest carbon storage through robotized forest management practices and strengthen the resilience of forests to climate change, while improving traceability and data-driven decision making.

Lead Partner Name

University of Naples Federico II

Lead Partner Country

Italy

Other Partners

Italy | Greece | Spain | TopView and Other Research Institutes | SMEs | Certification Bodies | Public Authorities Across Mediterranean Countries

Project Activities

Development of **digital forest inventory platforms; integration of geospatial, remote sensing, and AI tools**; deployment of robotic inventory devices; stakeholder engagement workshops; regulatory and ethical framework design; and pilot demonstrations in Mediterranean forest areas.

Target Groups/Beneficiaries

- Researchers
- Forest Managers
- Smes in the Wood Supply Chain
- Certification Bodies
- Public Authorities
- Mediterranean Forest Communities

Main Outputs/Results

Robotized forest inventory prototypes; decision support systems; traceability **digital platform**; **training sessions**; and **policy recommendations** for sustainable forest supply chains.

Project Quote

"DigiMedFor is pioneering the digital and robotized transformation of Mediterranean forest management, fostering low-carbon practices and climate resilience."

Remarks/Additional Notes

Project integrates **digital twin modelling** and **robotics** into traditional forestry practices for the first time in the Mediterranean region.

Geographical Scope

Mediterranean region (multiple EU and neighbouring countries) CERTH under took the pilot in KAVALA municipality Limnia Forest at north east Greece.



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Institution: CERTH (Centre for Research & Technology Hellas)

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[Click here for the project's website.](#)



Digitally-enabled FLEXible Industries for Reliable Energy Grids Under High Penetration of Variable Renewable Energy Sources (VRES)- FLEXIndustries

FLEXINDUSTRIES

Programme Name

Horizon Europe

Project Budget

17.084.536,66 €

Project Duration

2022 – 2026

Project Reference Number / Code

101058453

Priority Area



Resilience and Adaptation to Climate Change



Low Carbon Economy



Other: Industrial Energy Efficiency

Target Groups/Beneficiaries

- Large Enterprises & SMEs
- Industrial stakeholders
- Research Institutes & Universities
- Public Authorities & Policymakers
- Energy Grids & Utilities

Lead Partner Name

RINA CONSULTING SPA

Lead Partner Country

Italy

Other Partners

Greece *3 | Türkiye | Spain *3 | Italy *3 | Poland | Bulgaria | Switzerland

Project Activities

- Development of a **Dynamic Energy & Process Management Platform**
- **Monitoring, analysis, and optimization of energy-intensive industrial processes.**
- Integration of **demand-response mechanisms** and **provision of grid services.**
- Implementation of **Energy Efficiency Measures and Process Flexibility Methods**
- Process redesign / modification, electrification, automation, and digitalization.
- Deployment of **innovative energy generation, storage, and conversion technologies** (e.g., BESS, ORC, advanced heat exchangers, heat pumps, photovoltaics, solar thermal systems).
- **Demonstration** in Industrial Facilities
- **Testing solutions** in 6 industrial facilities across 6 countries (Türkiye, Greece, Poland, Bulgaria, Italy, Spain).
- **Collecting operational and economic data** to validate energy savings, cost reductions, and CO₂ emission reductions.
- **Support** for Business Models and Market Integration
- Developing **novel business models** and **market mechanisms** to enhance industrial flexibility and grid interaction.
- Dissemination and Stakeholder Engagement
- **Workshops, webinars, and reports** to share project results with industry, policymakers, and research communities.

Project Objectives

FLEXIndustries aims to enable energy-intensive industries to reliably integrate with energy grids under high penetration of Variable Renewable Energy Sources (VRES) by implementing advanced energy efficiency measures and process flexibility methods. The project develops a **Dynamic Energy & Process Management Platform** to monitor, analyse, and optimize industrial processes while providing plant flexibility and grid services. It integrates innovative energy generation, storage, and conversion assets with smart digital tools and novel business models to enhance operational efficiency. Demonstrations in **six industrial facilities across six countries (Türkiye, Greece, Poland, Bulgaria, Italy, and Spain)** target significant energy savings, fossil fuels usage reductions, cost reductions, and CO₂ emissions reductions, while increasing electrification, digitalization, and user satisfaction. A consortium of large enterprises, research institutes, SMEs, universities, and non-profit organizations ensures the successful implementation and impact of the project.

Project Quote

FLEXIndustries promotes **innovative energy efficiency and flexibility solutions** to the industrial sector, particularly in Southern Europe and the wider Black Sea region, strengthening decarbonization and sustainability. CERTH coordinates the technical and innovation management activities.

Geographical Scope

Türkiye, Greece, Poland, Bulgaria, Italy, and Spain

Main Outputs/Results

Alternative forest management models (aFMMs) developed at the case study areas were scaled up to European level (EU28) in order to assess the effects on a larger scale. The result was investigated for the EU in terms of available harvest volumes, biodiversity, and global trade. Setting aside larger areas would reduce production and increase imports from the rest of the world. This could in turn reduce biodiversity globally because if species richness in the land affected by imports of woody biomass to EU is higher than in the production forests of EU28. A balance could be struck between different ecosystem services by combining production oriented and multifunctional aFMMs, where multifunctional aFMMs could reduce the footprint of EU imports on the rest of the world.



Name: Nikolaos Nikolopoulos

Institution: Centre for Research and Technology Hellas

[Click here for the project's website.](#)



Domestic Production of Selected Analytical Mycotoxin Standards for Food and Feed Analysis

Programme Name

TÜBİTAK 1812 - BİGG

Project Budget

900.000,00 TL

Project Duration

2024 – 2025

Project Reference Number / Code

2230138

Lead Partner Name

Enur Biotechnology Industry and Trade Incorporated Company

Lead Partner Country

Türkiye

Other Partners

Türkiye

Priority Area



Other: Mycotoxin, Analytical Standard, Food Safety

Project Objectives

Through this project, **a model for the domestic production of analytical mycotoxin standards** was established. The analytical mycotoxin standards produced had a high commercialization potential, as they could be utilized by institutions and organizations conducting mycotoxin control and research activities in food and feed analyses within the country. Consequently, the need for importing these costly products was eliminated. Furthermore, since the product was domestically produced, users were able to access it more quickly and at lower cost, without the expenses and delays associated with import, transportation, and customs procedures.

Project Activities

Within the scope of the project, aflatoxins, which are commonly found in foods, were produced as analytical standard substances with a purity of over 90%. For this purpose, fungal isolates that had been previously isolated and identified from food samples cultivated in Türkiye during the entrepreneur's earlier TÜBİTAK 1005 project were utilized. Among the identified fungal isolates, those demonstrating high aflatoxin production performance were selected, and by employing statistical approaches, the growth conditions under which aflatoxin production reached its maximum level were determined. Under the optimized conditions, new productions were carried out, and aflatoxins were separated from other components in the extracts using chromatography systems.

Target Groups/Beneficiaries

Mycotoxin analyses are routinely conducted not only by **universities, research institutes, and regulatory public authorities**, but also by **private enterprises and exporting companies**. Furthermore, Provincial Food Control Laboratories under the Ministry of Agriculture and Forestry, as well as laboratories affiliated with the Union of Chambers and Commodity Exchanges, perform these analyses on a regular basis. Collectively, these institutions and organizations form a broad and diverse market of potential end-users, clearly demonstrating the commercial value and scalability of the proposed product.

Main Outputs/Results

As a result of this project, production processes that enabled the **procurement of mycotoxin analytical standards** from local toxigenic fungal isolates obtained from different agricultural products in Türkiye were developed, and technical know-how that eliminated the country's dependence on foreign sources was established by providing a projection for industrial-scale production. The import of **analytical mycotoxin standards**, which were needed in food and feed analyses and previously acquired from abroad at high costs, was prevented, and methods for their domestic production were developed.

Project Quote

As a result of the project, the product will be marketed at a lower price compared to its domestic competitors. Similarly, it is planned to be offered in **international markets** at a competitive price. In addition, in the **domestic market**, product supply times will be significantly shorter than those of competitors. Incoming order information and customer demands will be analyzed, and based on this analysis, a production plan will be developed. In this way, the delivery times of the products to customers will be reduced. The technical features of our product will fully meet customer expectations and are at a level that can compete with equivalent products.

Geographical Scope

Türkiye, other countries in the world if exported

Name: Murat Yilmaztekin

Institution: Enur Biotechnology Industry
and Trade Incorporated Company

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Ecotextyle: Vocational Education and Training on Product Environmental Management for the Footwear and Textile Sector



Programme Name

Erasmus+ KA2

Project Budget

723.472,24 €

Project Duration

2016 – 2020

Project Reference
Number / Code

2017-1-ESO1-KA202-038667

Priority Area



Low Carbon Economy



Other: Sustainable Production, Circular Economy

Project Objectives

The project aimed to train professionals in the footwear and textile sectors on **Product Environmental Footprint (PEF)** methodology, enabling SMEs and training centers to implement sustainable production practices. It developed online and face-to-face training materials on life cycle analysis, ecodesign, environmental labelling, and sustainability skills, ensuring alignment with future EU environmental policies.

Lead Partner Name

Centro Tecnológico del Calzado de La Rioja (CTCR)

Lead Partner Country

Spain

Other Partners

Bulgaria | Spain | Italy | Poland | Slovenia
United Kingdom

Project Activities

- Development of **training materials** on PEF methodology
- Creation of an **online training platform** and **face-to-face workshops**
- Transnational partner **meetings** (Spain, UK, others)
- **Pilot testing of training tools** in partner countries
- Dissemination via **project website**, Facebook page, and local partners

Target Groups/Beneficiaries

- SMEs In Footwear and Textile Sectors
- VET Trainers
- Students
- Product/Environmental Managers
- Policy Makers in Sustainable Production

Main Outputs/Results

- **Online multilingual training platform**
- Face-to-face **workshops** on sustainable footwear and textiles
- **Intellectual outputs** (training modules, guides, assessment tools)
- **Self-assessment tools** and **certification** options for SMEs
- **Increased awareness** and **skills** in sustainable product development in the sector

Project Quote

Ecotextyle equips footwear and textile SMEs with the skills and tools to integrate sustainability and Product Environmental Footprint into their daily practices, **preparing the sector for a greener and more competitive future.**

Remarks/Additional Notes

- Supported EU Product Environmental Footprint (PEF) policy implementation.
- Combination of formal and non-formal learning methods.
- Strong SME orientation in traditional industries transitioning towards sustainability.

Geographical Scope

Spain, Bulgaria, Italy, Poland, Slovenia, United Kingdom (with EU-wide application potential)



Name: Project Coordinator Team

Institution: Centro Tecnológico del Calzado de La Rioja (CTCR)

E-mail address: info@ctcr.es

[Click here for the project's website.](#)



Enhancing Standardisation Strategies to Integrate Innovative Technologies for Safety and Security in Existing Water Networks - Aqua3s



Programme Name	Horizon 2020
Project Budget	6.881.508,75 €
Project Duration	2019 – 2022
Project Reference Number / Code	832876

Priority Area



Other: Drinking Water Treatment Processes, Smart Sensors, Satellite Technology, Water Supply Systems

Project Objectives

The main objectives of aqua3S are to:

- Create **strategies and methods** in order a water facility to easily integrate solutions regarding water safety
- Propose **innovative sensor technologies** to support water safety
- Create **early warning methods** for water authorities
- Create a **complex collaborative system** recording problems and finding new solutions
- Allow **easy engagement of different authorities** in a water related crisis
- Create/use methods estimate the **infrastructure resilience level**
- Introduce **bottom-up approaches** such as citizen mapping initiatives, can be an effective way to build large exposure databases
- Model and classify a crisis event

Lead Organization

CERTH - Information Technologies Institute,
Centre for Research & Technology Hellas

Lead Country

Greece

Other Partners

Bulgaria *3 | Greece *4 | Belgium *2 | Cyprus
| Greece *4 | United Kingdom *2 | Czechia |
France *4 | Italy *3 | Spain | Ireland |
Germany

Project Activities

aqua3S foresees the improvement of innovation capacity and integration of new knowledge in five main areas of innovation:

- Innovation in **substance detection** in water
- Innovation in **data acquisition** from UAVs and earth observation
- Innovation in **social media monitoring**
- Innovation in **algorithms for threat detection** and **localisation** in the existing water distribution networks
- Innovation in **crisis management modelling** for enhance preparedness

Main Outputs/Results

- **Project management, communication, dissemination, identity materials, website, reports and public outputs**
- Financial and administrative **reports** (cumulative expenditure, mid-term and progress reports)
- **Data management** and **self-assessment plans**
- **Requirements, technical specifications and security reports**
- **Ethics, legal and policy frameworks**, responsible application guidelines
- **Sensor customization** (MIR, RI, microfluidic) and final packages
- System architecture, integration, security and optimization **reports**
- **Analytical tools and techniques** (threat detection, visual analytics, anomaly detection, crisis assessment, warning messages)
- Prototypes, pilots, evaluation, emergency response tools, final system, demonstrations and training
- **Market analysis**, exploitation and intellectual property **reports**
- Ontology, semantic reasoning and water security standardisation **strategy**

Project Quote

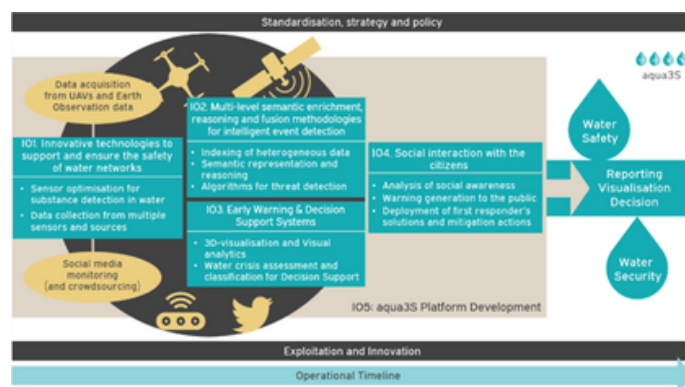
The EU-funded aqua3S project aims to standardise existing sensor technologies complemented by state-of-the-art detection mechanisms for drinking water networks. It will combine complex sensors with videos from unmanned aerial vehicles (UAVs), satellite images and social media observations from citizens reporting low-quality water.

Target Groups/Beneficiaries

- Water Utilities / Water Facilities
- Public Authorities & Regulators (Municipalities, Health Authorities, Civil Protection)
- Citizens / Local Communities (Safe Drinking Water, Social Awareness, Citizen Reporting)
- First Responders & Emergency Services
- Policy Makers & Standardisation Bodies
- Environmental Agencies & Ngos
- Researchers & Technologists (Sensors, Uavs, Satellite Imagery, Data Fusion, DSS)
- SMEs & Technology Providers (Sensor Technologies, Drones, ICT Solutions)

Geographical Scope

Belgium, Bulgaria, Cyprus, Czech Republic, France, Greece, Italy, Spain, Germany, and the United Kingdom



Name: Moutzidou Anastasia
Kintzios Spyridon
Gialampoukidis Ilias
Vrochidis Stefanos
Kompatsiaris Yiannis (Ioannis)

Institution: CERTH

[Click here for the project's website.](#)

Enzymatic CO₂ Capture in a Rotating Packed Bed and Electrocatalytic CO₂ Reduction to Useful Products - Reuse



Programme Name

Horizon Europe

Project Budget

3.756.130,00 €

Project Duration

2024 – 2026

Project Reference
Number / Code

101172954

Priority Area



Low Carbon Economy

Project Objectives

Project aims to develop an advanced CO₂ capture and utilization technology based on a Rotating Packed Bed (RPB) system that integrates immobilized Carbonic Anhydrase (CA) with advanced solvents. The captured CO₂ will be subsequently converted into value-added products, such as carbon monoxide (CO) or formic acid (FA), through an innovative, zero-gap CO₂ electrochemical reduction (CO₂R) cell.

Lead Organization

Centre for Research & Technology Hellas

Lead Country

Greece

Other Partners

Portugal | United Kingdom *3 | Denmark | Austria *2 | Greece | Italy

Project Activities

- Develop and test an 80 kWth pilot-scale fluidized bed unit for co-gasification/combustion.
- CA for enhanced CO₂ absorption.
- Design a CO₂R cell with advanced catalysts for efficient CO₂ conversion.
- Integrate these components into a TRL 5 pilot plant for continuous operation.
- Conduct life cycle assessments to demonstrate the project's circular economy potential and environmental benefits.

Main Outputs/Results

- Innovative CO₂ capture and conversion technologies -
- Reduction of CO₂ emissions, towards a Low-Carbon Footprint economy
- Cost-competitive, scalable systems ready for industrial integration, contributing to a circular economy
- Optimization of enzymes and catalysts, real-world validation, and dissemination of data and best practices

Project Quote

Revolutionizing Carbon Capture and Reutilization: by combining enzymatic capture and electrocatalysis, REUSE transforms CO₂ emissions into high added value products and sustainable opportunities.

Target Groups/Beneficiaries

- Research & Technology Organizations (RTOs)
- Policymakers/associations
- Technical/academia/certification bodies
- Business/investors/end-users
- Open public

Geographical Scope

Europe



Name: Athanasios PAPADOPOULOS
Stella BALOMENOU

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[Click here for the project's website.](#)



FOR-FREIGHT / Flexible, Multi-mOdal and Robust FREIGHT Transport



Programme Name

Horizon Europe

Project Budget

8.935.495,00 €

Project Duration

2022 – 2025

Project Reference
Number / Code

101069731

Priority Area



Resilience and Adaptation to Climate Change



Other: Sustainable / Green Transport

Project Objectives

FOR-FREIGHT aims at maximizing multimodal freight transport capacity and reducing the cost and environmental footprint of freight movement. It develops novel logistics solutions integrated with legacy enterprise systems to deliver **real-time door-to-door tracking**, decision support (including digital twins), resilience to disruptions, and carbon footprint monitoring. It is validated via three real trial sites in Spain, Greece, and Romania covering multimodal interfaces like seaport-to-airport, river port to rail, and last-mile delivery, fostering interoperable and collaborative freight logistics.

Lead Organization

Centre for Research & Technology Hellas

Lead Country

Greece

Other Partners

Romania *4 | Portugal | Greece *4 | Spain *4
Cyprus | Spain | Belgium | Austria

Target Groups/Beneficiaries

- Freight Forwarders
- Subway operators
- Node operators (Port, Airport)
- Standardization bodies

Main Outputs/Results

- One jointly developed solution: the **FOR-FREIGHT Platform** for multimodal logistics operations.
- Integration of metro transport into the transport chain for last mile deliveries of cargo.
- **CO2 Monitoring platform** - a telematics based system that calculates greenhouse gas emissions from port logistics using international standards.
- **Standardization contribution** at the multimodal interfaces – IATA/TIC4.0, Roll cage QR.

Project Activities

- **Develop innovative and interoperable transport and logistics (T&L) solutions** to boost capacity, efficiency, sustainability, and cost/environmental performance in multimodal services.
- **Build three advanced experimentation facilities in monitoring platform** real multi-stakeholder settings, upgrading existing infrastructure to support automated, cooperative multimodal logistics.
- **Validate FOR-FREIGHT solutions in real-life use cases (TRL≥7)** with end-user data, proving higher efficiency, sustainability, and cost-effectiveness compared to current fragmented logistics.
- **Promote new business models and collaborative approaches** for integrated T&L services, supported by strong data governance and socio-economic/environmental impact analysis.
- **Align with EU/global logistics standards,** contribute to standardisation, and maximize impact by engaging key stakeholders and ensuring wide dissemination, clustering, and exploitation.

Project Quote

FOR-FREIGHT's unique value propositions are designed to transform the freight transport landscape, offering a range of benefits for industry players and society alike. It enables more effective and sustainable management of goods across various transport modes and logistics nodes.

Geographical Scope

European Union



Name: Mr. Sofoklis Dais

Institution: CERTH / HIT

E-mail address: dais@certh.gr

[Click here for the project's website.](#)



Greener AgRo-food Logistics in the mEditerranean Area (GARDEN)



Programme Name

Interreg Euro-MED

Project Budget

2.891.330,00 €

Project Duration

2024 – 2026

Project Reference
Number / Code

Euro-MED0200635

Priority Area



Resilience and Adaptation to Climate Change

Project Objectives

GARDEN project aims to create ecological logistics for food supply and the sustainable management of bio-waste, packaging, and containers in Mediterranean cities. It supports the ecological transition by piloting **renewable energy-based infrastructure** (charging stations, biofuels), experimenting with **carbon-free logistics solutions**, and fostering long-term economic, technological, and organizational models for sustainable urban food systems.

Lead Organization

University of Zagreb

Lead Country

Croatia

Other Partners

Bulgaria | Spain | Italy | Montenegro | Greece *2 | Franca *2 | ESta - Economy and Sustainability

Project Activities

- **6 pilot demonstrators** in Spain, France, Italy, Greece, Bulgaria
- Infrastructure **modeling and testing** (renewable-based charging stations, biofuels)
- **Multi-actor consultation & Living Labs**
- **Guidelines** for energy system solutions
- **Support** to public authorities with recommendations for urban planning & logistics
- Methodological support for **circular economy integration**

Target Groups/Beneficiaries

- Local Authorities
- Logistics Operators
- SMEs In Agri-Food
- Waste Management Companies
- Citizens
- Researchers
- Policymakers

Main Outputs/Results

- Demonstration of **carbon-free logistics models**
- Recommendations for **sustainable urban food logistics policies**
- **Living Labs** in pilot territories
- Scalable models for **bio-waste and packaging management**
- Energy system **guidelines and technology testing results**
- Increased capacity of local actors in **sustainable logistics**

Project Quote

GARDEN pioneers **greener food logistics** in Mediterranean cities by connecting innovation, circular economy, and renewable energy to design sustainable supply chains from producer to consumer.

Remarks/Additional Notes

- BATTI (Bulgaria) plays a crucial role in circular economy, smart energy production, and pilot site implementation in Dolni Chiflik.
- The project involves 10 core partners and 9 associated partners, ensuring broad expertise across technical, policy, and local implementation levels.

Geographical Scope

Mediterranean area: Spain, France, Italy, Greece, Bulgaria, Montenegro



Name: Project Coordination Team

Institution: University of Zagreb

E-mail address: garden@interreg-euro-med.eu

[Click here for the project's website.](#)



Hydrogen PEM Fuel Cell Stack for Marine Applications – H2MARINE



H₂MARINE

Programme Name

Horizon Europe

Project Budget

7.499.171,50 €

Project Duration

2024 – 2027

Project Reference
Number / Code

101137965

Priority Area



Low Carbon Economy



Blue Economy

Project Objectives

Overarching objective of the H2Marine project is to design, build, test and validate two PEM stacks generating 250 - 300 kW electric power formatted for marine applications in a modular up-scalable design. H2MARINE aims to **advance PEM fuel cell technology and contribute to the transition towards cleaner and more sustainable maritime transportation.**

Lead Organization

Centre for Research and Technology – Hellas

Lead Country

Greece

Other Partners

Greece *2 | Sweden | Germany *4 | Finland
Switzerland *3

Target Groups/Beneficiaries

- Hydrogen value chain
- Fuel cell stack/system developers
- Shipping companies/owners
- Shipyards and ports
- Researchers
- Coastal communities

Main Outputs/Results

- **PEM fuel cell stacks** specifically designed for maritime applications.
- **Optimized stack modules** for future scalability, enabling power train systems of up to 10 MW by 2030.
- **Maritime PEM stacks** with lifetimes of 40,000 to 80,000 hours and a CAPEX below 1,500 EUR/kW by 2024, with a target of 1,000 EUR/kW by 2030.

Project Activities

The H2MARINE project takes a **top-down approach**, building on a proof of concept of two PEM stacks that are developed in the EU and Switzerland. The H2MARINE project will:

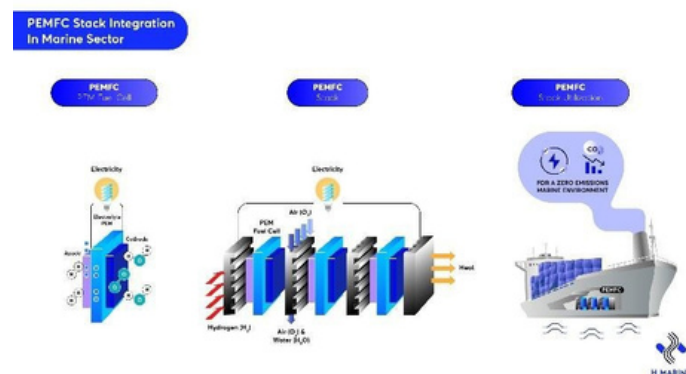
- **Identify the requirements** for the tests and conditions that the stacks will have to be tested against.
- Enhance the state of the art of PEMFC stacks, advance and scale up the system to reach ambitious targets.
- Test the **proposed solutions** in relevant environment/ecosystem, which are designed to fully represent the actual implementation conditions.
- **Design both stack modules** in an optimum manner for upscaling up to 10MW power train systems.
- Test several diagnostics for the stack and overall system integrity as well as for the health status prognosis of critical components.
- Assess the **technology and economic feasibility** of the solution, in order to know its valuable end- use, which will allow the partners to research the potential market/s and identify the best opportunities.

Project Quote

H2MARINE is leading the way in zero-emission shipping, delivering real results and practical solutions. Together, we are moving toward a cleaner, greener future uniqueness, or its impact on your institution or region.

Geographical Scope

Europe



Name: Kyriakos Panopoulos, Michael Bampaou

Institution: ARTEMIS | CPERI | CERTH

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[Click here for the project's website.](#)



Increasing the Conformance of Academia Towards Rehabilitation Engineering (i-CARE)



Programme Name

Erasmus+

Project Budget

-

Project Duration

2017 – 2020

Project Reference
Number / Code

586403-EPP-1-2017-1-
PS-EPPKA2-CBHE-JP

Priority Area



Other: Rehabilitation Technology, Higher Education,
Health Innovation

Project Objectives

Project aims to bridge the gap between rehabilitation technology and science education in Palestinian universities and rehabilitation practices in service providers. It improves curricula, trains academic staff, professionals, and students, and develops rehabilitation labs to EU standards.

Lead Organization

Al-Azhar University-Gaza

Lead Country

Palestine

Other Partners

Palestine *3 | Ireland | Bulgaria *2 | Slovenia

Project Activities

- Development of **rehabilitation technology and science courses**
- **Training** of academic staff, students, and professionals in EU partner universities
- Establishment of rehabilitation treatment & **training lab**
- **Curriculum development** in 4 Palestinian university departments
- **Transnational meetings, workshops, and training sessions**

Target Groups/Beneficiaries

- Academic Staff,
- Rehabilitation Professionals,
- University Students,
- Patients,
- Universities,
- Ministries Of Health / Education / Welfare,
- Local Community

Main Outputs/Results

- **New curricula** in rehabilitation technology and sciences
- **Trained academic staff and professionals** in EU and local institutions
- **Practical training** for students on real patient cases
- Establishment of a **rehabilitation lab** accessible to universities
- **Networking** between higher education and rehabilitation service providers nationally and internationally

Project Quote

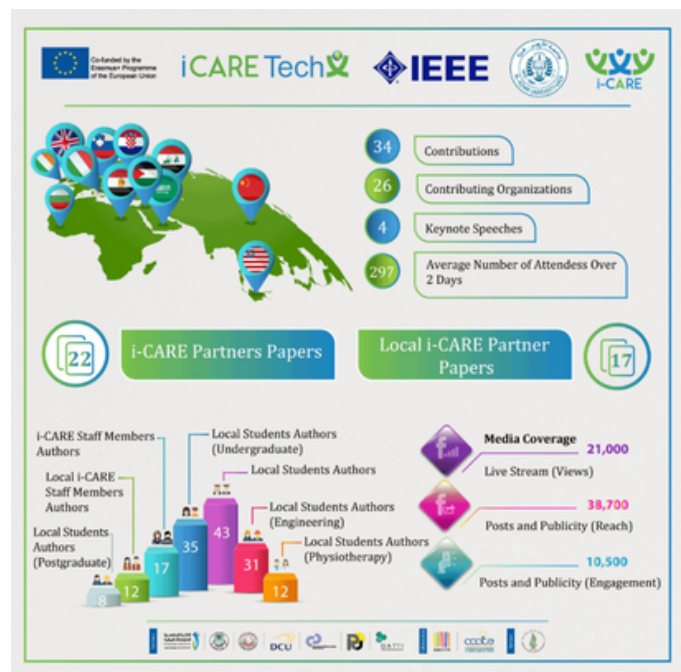
i-CARE bridges academia and rehabilitation practice, empowering Palestinian universities to deliver EU-standard education and innovation in rehabilitation sciences.

Remarks/Additional Notes

The project had a strong **capacity-building focus, enhancing the knowledge and skills** of both academic and medical sectors in Palestine.

Geographical Scope

Palestine, Ireland, Bulgaria, Slovenia (EU partners + Palestine)



Institution: Al-Azhar University-Gaza

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Click here for the project's website.

Industrial Data Services for Quality Control in Smart Manufacturing - i4Q



Programme Name

Horizon 2020

Project Budget

11.442.342,51 €

Project Duration

2021 – 2024

Project Reference
Number / Code

958205

Priority Area



Other: Software, Control Systems, Subtractive Manufacturing, Microtechnology, Forestry

Project Objectives

Main objectives of i4q are to:

- I4Q will provide a **complete solution** to improve the quality of manufactured products aiming at ZERO-DEFECT manufacturing.
- i4Q aims to provide an **IoT-based Reliable Industrial Data Services (RIDS)**, a complete suite consisting of 22 i4Q Solutions.
- Manage the huge amount of **industrial data** coming from cheap cost-effective, smart and small size interconnected factory devices

Lead Organization

Centre for Research & Technology Hellas - CERTH

Lead Country

Greece

Other Partners

Bulgaria | Türkiye | Portugal *3 | Germany *3 | Spain *6 | Italy *5 | Austria | Belgium | Poland | Israel

Project Activities

i4Q Project aims to provide a complete solution consisting of an IoT-based Reliable Industrial Data Services (RIDS), a complete suite composed of 22 i4Q Solutions, able to manage the huge amount of industrial data coming from cheap cost-effective, smart, and small size interconnected factory devices for supporting manufacturing online monitoring and control.

- Manufacturing Data Quality
- Manufacturing Data Analytics for Manufacturing Quality Assurance
- Rapid Manufacturing Line Qualification and Reconfiguration
- Digital tools
- Real-world trials

Target Groups/Beneficiaries

- Manufacturing companies
- SMEs in manufacturing sector
- Machine tool providers
- Industry workers / production line operators
- Researchers & technologists (IoT, AI, data analysis, simulation, optimisation)
- Start-ups & technology companies (e.g., i4Q spin-offs, CDXi solutions)
- Industrial sectors: metal products, wood, white goods, metal machining, ceramics, plastics
- Industrial ecosystems / marketplaces (e.g., i4FS platform)
- Public authorities & policy makers (indirectly, through sustainable/green manufacturing policies)

Project Quote

Manufacturing companies are continuously facing the challenge of redesigning and adjusting their manufacture systems.

Geographical Scope

Greece, Italy, Spain, Bulgaria, Poland, Türkiye, Belgium, Austria, Portugal, Germany, Israel

Main Outputs/Results

- Impact Activities, Clustering and Regional Interactions
- **Website, Materials Production, Dissemination and Communication Outputs**
- **Cybersecurity**, IoT/IIoT Security and Trusted Networks
- Solutions **Handbook**, Demonstrators (all versions), **Digital Twin, Analytics Dashboard, Big Data Analytics Suite**
- **Guidelines and Toolkits**: Data Quality, Repositories, Manufacturing Line Reconfiguration, Data Certification, Standardisation
- Requirements Analysis, Reference Architecture, Models and Ontologies, Business Viewpoint
- **Data Services**: Integration, Transformation, Edge Deployment, Continuous Validation, Infrastructure Monitoring
- **Analytical Tools**: Prescriptive Analysis, QualiExplore, Blockchain Traceability, Process Qualification, Rapid Quality Diagnosis, AI Models to the Edge, Services for Data Analytics
- Demonstration Scenarios, Pilots, KPIs and Monitoring
- Industrial Advisory Board and Workshops Feedback Reports
- Project Vision and Policy /Strategy Documents

Name: Apostolou Georgia,

Gialampoukidis Ilias, Vrochidis Stefanos

Institution: CERTH

[Click here for the project's website.](#)



Innovative System for Remote Immersion in Underwater Environments - i-ScubaDiving



Programme Name

Innovation Investment Plans

Project Budget

399.910,23 €

Project Duration

2022 – 2025

Project Reference Number / Code

KMP 6-0082362

Priority Area



Blue Economy



Other: Digital Cultural Heritage, Immersive Technologies for Education and Tourism

Project Objectives

Project aims to develop innovative services for the effective, efficient, and remote 3D digitization of underwater sites such as shipwrecks and reefs. It also seeks to provide an engaging “dry” underwater diving experience through Virtual Reality (VR), enriched with Augmented Reality (AR) features that deliver additional information about the site, for example, the structural characteristics of a submerged vessel.

Lead Organization

DiveSkopelos

Lead Country

Greece

Other Partners

Greece *3

Project Activities

- Promotion and showcasing of **underwater archaeological sites, natural seascapes, and shipwrecks** through globally accessible virtual reality environments.
- Enabling access for non-diving citizens via the development of a **geo-referenced crowdsourcing platform**.
- **Protection** of underwater monuments and landscapes, enhancement of efficiency in underwater operations, and improvement of diving safety.

Target Groups/Beneficiaries

- Divers
- Academia
- Investors in Blue Economy
- Public authorities

Main Outputs/Results

Project is delivering **advanced algorithms and services** for the creation of **high-quality 3D models of underwater sites**, enabling accurate digital preservation and analysis. It has also developed algorithms and services for building **immersive virtual environments**, allowing users to explore underwater heritage and ecosystems remotely. A crowdsourcing platform has been developed and is being established to engage citizens and divers in contributing data, complemented by the **i-ScubaDiving App**, which provides tools for interaction, and data submission. In addition, the project defines and promotes methodologies for appropriate underwater photo acquisition to ensure the reliability and consistency of the 3D reconstructions. Collectively, these outcomes will enhance digital documentation, citizen science participation, and accessibility of underwater cultural and natural heritage.

Project Quote

Discover the underwater world, all from dry land.

Geographical Scope

Initially Northern Greece, but there is possibility for global deployment



Name: Dimosthenis Ioannidis

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Technology - Hellas

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[Click here for the project's website.](#)



Innovative Techniques and Methods for Reducing Marine Litter RedMarLitter



RedMarLitter

Programme Name

Joint Operational
Programme BSB 2014-2020

Project Budget

3.999.998,75 €

Project Duration

2016 – 2020

Project Reference
Number / Code

676754-2

Priority Area



Resilience and Adaptation to Climate Change

Project Objectives

RedMarLitter project aimed to develop innovative methodologies and databases to identify marine litter “hot spots” in the Black Sea region. It promoted coordinated actions to reduce marine litter through **clean-up campaigns, eco-management guidelines, and awareness raising**. By fostering regional cooperation and involving citizens, the project contributed to healthier marine and coastal ecosystems.

Lead Organization

Foundation Via Pontica

Lead Country

Bulgaria

Other Partners

Romania | Bulgari | Georgia

Project Activities

- **Identification and mapping** of marine litter hot spots.
- Creation of a **joint database and methodologies** for monitoring.
- **Clean-up campaigns** in coastal communities and **pilot actions**.
- Development of an **eco-management guide** with innovative reduction measures.
- **Educational workshops and public awareness** initiatives across the region.

Target Groups/Beneficiaries

- Research institutes and universities
- Environmental authorities and policy makers
- NGOs and civil society organizations
- Coastal communities and schools (through citizen science and awareness campaigns)
- Fisheries and seafood consumers (via food safety assessments)

Main Outputs/Results

Joint database of marine litter hot spots.
30 innovative measures to reduce marine litter.
Eco-management guide for coastal communities.
Cross-border campaigns and public education programmes.

Project Quote

RedMarLitter united communities and researchers to tackle marine litter with innovative solutions and shared responsibility

Remarks/Additional Notes

- Promoted innovative **waste management practices and reduction measures**.
- Engaged citizens through **educational and clean-up activities** in four Black Sea countries.

Geographical Scope

Coastal communities, NGOs, schools and youth groups, researchers, local authorities, environmental agencies.



Name: Dr. Ina Agafonova

Institution: VIA PONTICA FOUNDATION

E-mail: office@viapontica.org

[Click here for the project's website.](#)



Innovative Transportation Services for Blind and Partially Sighted Passengers in Danube Region - DANOVA



Programme Name

Interreg Danube
Transnational Programme

Project Budget

2.622.400,00 €

Project Duration

2020 – 2022

Project Reference Number / Code

543

Priority Area



Other

Project Objectives

DANOVA aimed to improve accessibility of airports, ports, train and bus stations for blind and partially sighted passengers in the Danube Region. It focused on developing new services, staff competences, and harmonised approaches to ensure equal access to transport information and services, reducing barriers in mobility and enhancing inclusion.

Lead Organization

Dubrovnik Airport

Lead Country

Croatia

Other Partners

Bulgaria | Hungary *2 | Slovenia *2 | Slovakia
| Croatia *2 | Austria | Montenegro *3 |
Bosnia & Herzegovina | Moldova

Project Activities

- International investigation of **best practices** in transport accessibility
- Drafting and adoption of the **Danova Capitalisation Strategy** for policymakers
- Stakeholder engagement in designing an **accessible transport concept**
- **Pilot testing** of innovative solutions at partner sites
- **Training** personnel to use services and assist blind / partially sighted passengers

Target Groups/Beneficiaries

- Blind and Partially Sighted Passengers
- Transport Operators (Airports, Ports, Rail, Bus)
- Local Authorities
- Accessibility Experts
- Ngos Supporting Visually Impaired Persons
- Policymakers in the Danube Region

Main Outputs/Results

- **Capitalisation Strategy** for accessible transport in the Danube Region
- **Best practices catalogue and transfer guidelines**
- **Pilot demonstrations** of accessibility solutions in airports/ports/stations
- **Training modules** for staff on communication and assistance
- New services introduced to **improve independent travel** for blind passengers.

Project Quote

DANOVA helps over **30 million** blind and partially sighted Europeans by making transport facilities inclusive and accessible, ensuring equal opportunities in travel across the Danube Region.

Remarks/Additional Notes

First transnational project in the Danube Region focusing on visually impaired passenger mobility. Created a Capitalisation Strategy to guide long-term policy and infrastructure changes. Strong consortium combining transport hubs, universities, municipalities, and blind associations.

Geographical Scope

Danube Region (Croatia, Slovakia, Hungary, Slovenia, Bulgaria, Austria, Montenegro, Bosnia & Herzegovina, Moldova + associated partner countries)



Accessible transport

Name: Dubrovnik Airport

Institution: Dubrovnik Airport

E-mail address: info@airportsdubrovnik.hr

[Click here for the project's website.](#)



Integrated micro CCHP Stirling Engine Based on Renewable Energy Sources for the Isolated Residential Consumers from South-Eastregion of Romania- m-CCHP-SE

Programme Name

EEA Grants Program

Project Budget

3.218.668,00 €

Project Duration

2009 – 2011

Project Reference
Number / Code

RO0054

Priority Area



Resilience and Adaptation to Climate Change

Project Objectives

To develop and implement an integrated micro Combined Cooling, Heating, and Power (CCHP) system utilizing Stirling engines and renewable energy sources for isolated residential users in the South-East region of Romania.

Lead Organization

Dunarea de Jos University of Galati

Lead Country

Romania

Other Partners

Romania *3 | Norway

Target Groups/Beneficiaries

- Researchers
- Universities
- Public authorities

Project Quote

Providing CCHP solutions powered by renewable energy for residential consumers in areas of Romania that lack access to the main power grid.

Name: Prof. Dr. Nicolae Badea

Institution: "Dunarea de Jos" University of Galati

[Click here for the project's website.](#)



Integrated System for Complex Environmental Research and Monitoring in the Danube River Area REXDAN



Programme Name

Competitiveness
Operational Programme

Project Budget

91.972.096,30 lei

Project Duration

2020 – 2023

Project Reference
Number / Code

309/10.07.2020, Cod SMIS
2014:+ 127065

Priority Area



Resilience and Adaptation to Climate Change

Target Groups/Beneficiaries

- Researchers
- Universities
- Public authorities

Project Quote

Creating a research infrastructure of excellence in the field of smart specialization Energy, environment, climate change, infrastructure consisting mainly of a research ship, a fixed research center and a self-laboratory that will host 18 laboratories equipped with state-of-the-art equipment.

Lead Organization

“Dunarea de Jos” University of Galati

Lead Country

Romania

Project Activities

- Purchase of mobile facilities. Purchase of a **research vessel** to provide research along the entire length of the navigable area of the Danube River. Purchase of a self-contained laboratory.
- Purchase of a building with the associated land for the development of **modern laboratories**.
- Purchase of tangible assets (mobile systems, installations, research equipment) for the research vessel in accordance with its capabilities and tangible assets (installations, research equipment) for the fixed research center within the REXDAN project.
- Purchase of intangible assets necessary for the implementation of the project, the development of activities and the processing of results.
- **Project management**
- **Project implementation**
- Information and publicity for the REXDAN project and for the activities developed by it
- **Project audit**

Project Objectives

Increasing the research capacity of the "Lower Danube" University of Galati in the field of smart specialization: **Energy, environment, climate change** in the Danube river basin by virtue of the inclusion of the infrastructure financed by the project in the National Roadmap of Research Infrastructures in Romania 2017-2027, approved by the Order of the Minister of Research and Innovation no. 624/03.10.2017 and to ensure synergies with the Danubius RI project and the ACTRIS project, both included in the European Strategy Forum on Research Infrastructures (ESFRI). Intensifying the Romanian contribution to the progress of multidisciplinary knowledge in research areas of complex interest. The REXDAN approach refers both to fundamental fields such as: ecology, chemistry, physics, biology, environmental science, etc., but also to areas such as: aquatic ecosystems including water, soil, sediments, flora, fauna, environment, climate change, the impact of anthropogenic activity, sustainable development, etc.

The REXDAN project creates opportunities for a unique experimental base on inland waters in Europe and facilitates Romania's participation in top projects in multidisciplinary research directions in which the fundamental part is associated with applied research in collaboration not only with the academic environment but also with other types of state and private structures, which enriches the Romanian area of participation in large-scale projects.

Main Outputs/Results

The expected results consist of the **creation of a research infrastructure of excellence** in the aforementioned field of **intelligent specialization**, consisting mainly of: a research ship, a fixed research center, a self-laboratory, **18 laboratories**, equipped with state-of-the-art equipment: **186 tangible assets** - research equipment and instruments, **94 tangible assets** - IT and communications equipment, **96 intangible assets** and 178 pieces of equipment.



Name: REXDAN Research Center

Institution: "Dunarea de Jos" University of Galati

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[Click here for the project's website.](#)



Interdisciplinary Cross-sectoral Approach to Effectively Address the Removal of Contaminants of Emerging Concern from Water



Programme Name

Horizon 2020

Project Budget

3.897.678,24 €

Project Duration

2017 – 2022

Project Reference
Number / Code

AMD-765860-23

Lead Organization

Turin University

Lead Country

Italy

Other Partners

Türkiye | Greece *2 | Italy *6 | France *3
Denmark *3 | Spain *2 | Norway

Priority Area



Other: Safe Water

Project Objectives

- **Prioritization and choice** of proper CECs
- To develop **sensitive analytical methods** based on green analytical chemistry approaches and high-resolution analytical tools for the determination of CECs and their transformation products down to trace levels in wastewaters and water for human consumption
- To elucidate the significance of photochemical reactions and their contribution to the abiotic transformation of **CECs in water systems**
- To assess the **toxicity of CECs**, their degradation products (DPs) and pathogens with sensitive bioassays
- To improve **NORMAN database**

Project Activities

AQUALITY is a multidisciplinary, cross-sectoral European training network comprising 17 participants (7 universities, 3 research institutes and 8 industrial organisations). Through the targeted project, a total of 15 students have been accepted into the doctoral programme. Each of these students has been trained within this training network, circulating among the partners to increase their knowledge and experience. These students have developed **new hybrid technologies** for the multidisciplinary treatment of contaminants of emergency concern (CECs) in water, according to the NORMAN list (Network of Reference Laboratories). These students tested the methods they developed, which will increase their **scientific and innovative entrepreneurial capacity** for wastewater treatment technologies, on real examples in industrial establishments.

The overall objective of the **AQUALITY** project is to develop innovative, non-traditional, hybrid, green technologies, particularly sensitive to sunlight in the visible region, for the removal of these contaminants from water. To this end, the doctoral students have developed advanced oxidation technologies (organic photocatalysts, sensitised photocatalysts, photo-Fenton); material development, nanofiltration technologies, and hybrid photochemical/membrane systems. **New methods** have been developed using advanced analytical instruments for these pollutants and their degradation products. This project aims to produce commercially marketable everyday materials from research-generated materials through industrial partnerships and to bring them to market.



[Click here for the project's website.](#)

Introducing a New Product to the Market as a Result of Technological Transfer of Innovative Solutions

Programme Name

Regional Operational
Program

Project Budget

48.751,00 lei

Project Duration

2023 – 2024

Project Reference
Number / Code

804-Cod MySMIS 151173

Priority Area



Resilience and Adaptation to Climate Change

Project Objectives

Provision of **technology transfer** services by CTT

Main Outputs/Results

The innovative product. "Dough composition for gluten-free appetizer biscuits"

Project Quote

"Dough composition for gluten-free appetizer biscuits"

Lead Organization

"Dunarea de Jos" University of Galati

Lead Country

Romania

Other Partners

Romania

Project Activities

- Experimental development activities / **innovation activities.**
- Activities to create the **innovative product.**

Target Groups/Beneficiaries

- Researchers
- Universities
- Public authorities



Name: Prof.Dr. Petru Alexe

Institution: "Dunarea de Jos" University of Galati

Invasive Alien Species Observatory and Network Development for the Assessment of Climate Change Impacts and Contextual Ecosystem Services Evaluation in Black Sea Deltaic Protected Areas – IASON+



Programme Name

Interreg NEXT BSB
Programme

Project Budget

1.396.112,46 €

Project Duration

2024 – 2026

Project Reference Number / Code

BSB00174

Priority Area



Resilience and Adaptation to Climate Change

Project Objectives

The Black Sea bioregion faces pressure from non-native species, maritime transport, climate change, and economic development. **The project aims to address the impact of Invasive Alien Species (IAS) on Ecosystem Services (ES) by enhancing the management and mitigation of IAS, reducing its spread, improving ecosystem resilience, and ensuring sustainable ES provision in the deltaic regions.**

Target Groups/Beneficiaries

- Researchers
- Universities
- Public Authorities

Lead Organization

Danube Delta National Institute for Research and Development

Lead Country

Romania

Other Partners

Türkiye | Greece | Romania | Ukraine | Georgia

Project Activities

- Common Invasive Alien Species (IAS) and Ecosystem Services (ES) monitoring and evaluation protocols for **climate change adaptation**
- **Capacity building** on Natura 2000 mapping in the non-EU project's nature protected areas for balanced ecosystem
- Invasive Alien Species and Ecosystem Services Observatory to allow **cross-border networking, communication and research activities**
- **Living Lab activity** with students through field visits, workshops, and practical exercises, collaborating with researchers for increasing awareness amongst youth
- **Bio-Rooms concept** (a museum type gallery of the regional biodiversity) in each partner country to **raise ecological awareness** among the general public especially youth

Main Outputs/Results

- 1 jointly developed solution
- An invasive Alien Species and Ecosystem Services Observatory to integrate tools into management plans, supporting stakeholders with a data driven platform, mobile apps, and a Living Lab to promote citizen science and education.

Project Quote

We combat invasive alien species in Black Sea deltaic protected areas, boosting resilience and ensuring sustainable ecosystem services.

Geographical Scope

Black Sea Basin



Name: Prof. Dr. Fatma TELLİ KARAKOÇ

Institution: Karadeniz Technical University

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Joint Cultural Heritage – Source for Development of Entrepreneurship in the Black Sea Basin - TREASURE



TREASURE

Programme Name

Joint Operational
Programme BSB

Project Budget

939.544,00 €

Project Duration

2018 – 2020

Project Reference Number / Code

BSB-371 eMS code

Priority Area



Other: Cultural Heritage, Tourism, Entrepreneurship Development

Project Objectives

TREASURE fostered **entrepreneurship development** in **cultural heritage and tourism** across the Black Sea Basin by creating infrastructure, equipping partners with **modern technologies**, **promoting underwater cultural heritage**, and **raising awareness of the economic value of shared cultural assets**. It encouraged cooperation between partner regions to jointly valorize natural and cultural resources for sustainable growth.

Lead Organization

Constanta County Council

Lead Country

Romania

Other Partners

Türkiye | Bulgaria | Moldova

Project Activities

- Creation and equipping of infrastructure for heritage and tourism
- **Research and museum exhibitions** on natural, underwater, and cultural heritage
- **Training seminars** for guides and underwater archeology courses
- Cultural heritage **events and festivals**
- Development of an interactive underwater **digital map**
- Installation of **innovative holographic projection systems**
- Establishment of **underwater research & water sports center** in Enez

Target Groups/Beneficiaries

- Local Communities
- Entrepreneurs In Tourism & Culture
- SMEs,
- Researchers, Educators/Students
- Divers, Guides, Tourists
- Cultural Institutions, Museums
- Policymakers In Partner Regions

Main Outputs/Results

- Reconstruction film of Middle Ages heritage
- 500 CDs, 1 digital atlas/album
- Active underwater research & water sports center (Enez)
- Training seminar for guides + underwater diving course
- 2 holographic projection systems (Constanța & Bulgaria)
- Laboratory for archeology (Constanța)
- Digital interactive underwater map (Romania, Bulgaria, Türkiye)
- Reconstructed building in Enez
- Holistic study of Bulgarian Black Sea Basin heritage



Project Quote

TREASURE demonstrated how **cultural heritage and innovative technologies — from underwater maps to holographic projections — can spark entrepreneurship and connect Black Sea communities** through shared history

Remarks/Additional Notes

- **Strong focus** on underwater cultural heritage and digital innovation
- Introduced **holographic visualization** of Black Sea shipwrecks
- **Digital underwater map** is a pioneering research and tourism tool
- Project duration extended due to COVID-19, but all outputs were delivered successfully.

Geographical Scope

Romania (Constanța), Bulgaria (Black Sea Basin), Türkiye (Enez), Republic of Moldova (Ungheni)

Name: Constanta County Council

Institution: Constanta County Council

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[Click here for the project's website.](#)



Knowledge Transfer Regarding the Energy Efficiency Increase and Intelligent Power Systems - CRESC-INTEL

Programme Name

Competitiveness
Operational Programme

Project Budget

16.560.875,04 lei

Project Duration

2016 – 2022

Project Reference Number / Code

POC 105803 /
12/01.09.2016 – P_40_340

Priority Area



Resilience and Adaptation to Climate Change

Project Objectives

Increasing the transfer of technological knowledge and personnel with RDI skills between the "Dunarea de Jos" University of Galati and enterprises developing businesses in the field of electricity with results required by the market. **Project aims to establish partnerships between the "Dunarea de Jos" University of Galati and enterprises interested in obtaining knowledge, including skills and competencies regarding increasing energy efficiency and intelligent power systems** in order to obtain a competitive, technical and economic solution for an intelligent Active Power Filter (APF) system.

Lead Organization

"Dunarea de Jos" University of Galati

Lead Country

Romania

Other Partners

ItalyL | Romania *6

Project Activities

- Stimulating **knowledge transfer**
- **Access of enterprises** to facilities, installations, equipment
- Activities for **transferring skills/competences R&D and supporting innovation**
- R&D in **effective collaboration** (a collaboration contract is concluded with a single enterprise, but there may be several such contracts)

Target Groups/Beneficiaries

- Researchers
- Universities
- Public authorities

Main Outputs/Results

Expected results by achieving specific objective 3 are: a number of **4 contracts** implemented in collaboration with enterprises, of which 3 are SMEs; a number of 4 contracts with enterprises that requested support for introducing new products to the market; a number of 18 scientific publications together with enterprises as a result of the contracts; a patent application.

Project Quote

Prototype Active Power Filter



Name: Prof. Dr. Marian Gaiceanu

Institution: "Dunarea de Jos" University of Galati

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[Click here for the project's website.](#)



Mapping the Spatial and Temporal Variations of NPP and Carbon Sink Capacity in Turkish Forests Using Machine Learning-Based Models

Programme Name

TÜBİTAK 2515

Project Budget

1.800.000,00 ₺

Project Duration

2025 – 2028

Project Reference
Number / Code

2240285

Priority Area



Resilience and Adaptation to Climate Change



Low Carbon Economy

Project Objectives

The project aims to model the carbon sink capacity and Net Primary Production (NPP) of Turkish forests using remote sensing, machine learning, and spatial analysis. It addresses the impacts of climate change using IPCC scenarios and generates national-scale carbon sink maps.

Lead Organization

Karadeniz Technical University

Lead Country

Türkiye

Other Partners

Türkiye *2

Project Activities

- Data collection and processing (MODIS, DEM, IPCC), spatial analysis (ArcGIS)
- Development of ML models (RF, ANN, CNN)
- Generation of NPP and carbon sink maps under current and future climate conditions

Target Groups/Beneficiaries

- Public Authorities (e.g. Ministry Of Environment, OGM),
- Researchers,
- Forestry Planners,
- Graduate Students,
- Carbon Market Actors

Main Outputs/Results

- **Carbon sink capacity maps** of Turkish forests
- **Trained ML models** (Decision Tree, RF, ANN, CNN)
- **Public spatial datasets and documentation**
- **Scientific publications** (Q1 journals)
- Dissemination through **website, training and workshops**

Project Quote

This project brings national-scale, AI-powered insight into how Turkish forests function as climate regulators under future scenarios.

Remarks/Additional Notes

The project supports Türkiye's compliance with EU Green Deal and IPCC carbon reporting goals. It also contributes to the objectives of COST Action CA21138 by integrating forest health, soil, and climate factors via machine learning.

Geographical Scope

Türkiye (All forest ecosystems across Black Sea, Mediterranean and Continental ecological regions)

Name: Prof. Dr. Bülent TURGUT

Institution: Karadeniz Technical University

E-mail address: bulentturgut@ktu.edu.tr

[Click here for the project's website.](#)



MEDiterranean COllaborative LOGistics for the URban Space – MED COLOURS

MED COLOURS

Programme Name

Interreg EUROMED

Project Budget

2.667.400,00 €

Project Duration

2022 - 2025

Project Reference Number / Code

Euro-MED0200522

Priority Area



Resilience and Adaptation to Climate Change

Project Activities

- Mapping of relevant previous EU projects' legacy and **creation of a knowledge data base for sustainable urban logistics.**
- Guidance to the project cities for drafting resilient **Sustainable Urban Logistics Plans (SULPs)**. 6 SULPs drafted in total.
- Identification of the needs of the project's cities and planning of **innovation-driven urban logistics solutions.**
- Five pilot cities: Cessena, Lisbon, Livorno, Lyon, Koper. The cities implement measures for sustainable logistics operations as part of their **Sustainable Urban Logistics Plans.**
- **Impact** assessment of these solutions.

Lead Organization

ITL – Fondazione Istituto sui Trasporti e la Logistica

Lead Country

Italy

Other Partners

Greece | Belgium | Spain | France | Italy *2
Slovenia *2 | Portugal *2

Target Groups/Beneficiaries

- Mediterranean Cities



Main Outputs/Results

Developed solution

Guidance on drafting resilient SULPs by integrating the topic guide **Sustainable Urban Logistics Planning of the EU Guidelines for SUMP with an adaptive approach** based on potential solutions, operational standards/indicators and methods to be applied in planning, monitoring and updating phases.

Project Quote

Upscaling to a new generation of urban logistics and planning enabling the transition to decarbonized and smart cities.

Geographical Scope

Mediterranean Area

Name: Orestis Tsolakis

Institution: Centre for Research and Technology Hellas (CERTH)/ Hellenic Institute of Transport (HIT)

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[Click here for the project's website.](#)



Mobilair – Data-Driven & User Centric Mobility for Air Improvement in the City of Thessaloniki



Programme Name

ICLEI - Local Governments for Sustainability

Project Budget

270.000 €

Project Duration

2024 – 2026

Project Reference Number / Code

-

Priority Area



Low Carbon Economy

Project Objectives

MOBILAIR focuses on **climate justice** in the city of Thessaloniki and considers Air Quality Management and Sustainable Urban Mobility.

MOBILAIR **evaluates potential user-centric, data-driven Air Quality management measures**, aiming to influence travelers' behavior towards environmentally friendly Urban Mobility choices.

Lead Organization

Centre for Research and Technology Hellas – Hellenic Institute of Transport (CERTH/ HIT)

Lead Country

Greece

Other Partners

Greece

Target Groups/Beneficiaries

Citizens of the city of Thessaloniki, Municipality of Thessaloniki, Researchers, Local businesses.

Project Quote

Breathe Better, Move Smarter with MOBILAIR

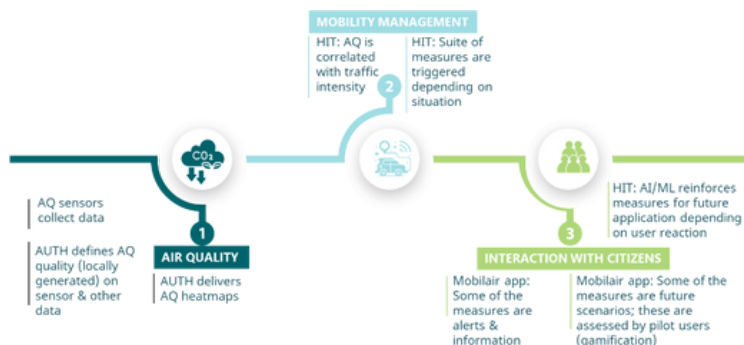
Geographical Scope

Municipality of Thessaloniki, Central Macedonia Region, Greece

Main Outputs/Results

The project's main outcome is an **AI behavioral understanding mobile application**. Pollution concentrations and traffic profiles will be compared and correlated, and specific thresholds will be extracted for triggering of potential measures, which will be promoted to and evaluated by the public through an AI-powered behavioral understanding mobile app, which has a two-fold objective:

- **Raise Awareness:** Raise awareness among citizens to promote sustainable mobility choices, and
- **Optimization:** Optimize the adoptability of measures, promoting greener travel habits, by appraising their attractiveness through a pilot user pool.



Project Activities

- Mobilair is a system **designed to improve urban air quality and mobility management** through data collection, analysis, and citizen engagement. Its operation consists of three main components:

• 1. Air Quality

Air Quality sensors collect data on pollutants, AUTH analyzes sensors and other locally generated data to define air quality levels and produces and delivers detailed AQ heatmaps.

• 2. Mobility Management

HIT correlates air quality with traffic intensity. Based on the situation, HIT activates a suite of measures aimed at improving air quality and managing mobility.

• 3. Interaction with Citizens

The Mobilair app provides users with alerts and information regarding air quality and traffic-related measures. Some measures are presented as future scenarios within the app, allowing pilot users to assess them through gamification. Using AI and machine learning, HIT refines and reinforces measures for future applications based on user feedback.

Name: Dr. Georgia Ayfantopoulou

Institution: Centre for Research and Technology Hellas – Hellenic Institute of Transport (CERTH/ HIT)

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[Click here for the project's website.](#)



Multidimensional Model of Tourism Verticals Driving the Sustainable Balanced Growth Among Rural & Remote Grids and Urban Clusters of Rural Regions, Fostering Macro-Regional Cooperation - TOURAL



Programme Name

Horizon Europe

Project Budget

2.999.927,50 €

Project Duration

2024 – 2026

Project Reference
Number / Code

101132489

Priority Area



Other: Cultural & Creative Tourism, Heritage, Rural Development

Project Objectives

TOURAL focuses on **cultural and creative tourism as a driver for sustainable development**, aligned with the EU transition pathway for tourism. It proposes a model to balance **growth between urban clusters and remote/rural grid cells** in participating regions. The modelling is multi-dimensional across tourism verticals—underwater cultural and nature heritage tourism, cultural and creative tourism, cultural science tourism, and silver tourism—using participatory co-design, co-creation of business models and products, and integrated value-chains at macro-regional level. The scope of interventions spans three regions in the Adriatic-Ionian macro-region (Italy, Croatia, Greece) and three in the Black Sea Basin (Bulgaria, Romania, Ukraine)

Lead Organization

Ethniko Kentro Erevnas Kai Technologikis Anaptyxis (CERTH)

Lead Country

Greece

Other Partners

Bulgaria *3 | Greece *5 | Romania | Türkiye
Ukraine *2 | Italy *3 | France *3 | Croatia

Target Groups/Beneficiaries

- Regional and local authorities and policymakers.
- Tourism SMEs/operators and value-chain actors.
- Researchers, universities, and knowledge organizations.
- Communities in participating rural and remote regions.

Main Outputs/Results

- **Increase macro-regional cultural tourism cooperation** to help the socioeconomic development of rural and remote areas.
- **Develop cultural and creative tourism business models** for rural and remote areas to increase sustainable jobs and investments.
- **Promote inclusive and sustainable cultural & creative tourism** that fosters social inclusion, respects local needs, heritage, and capacity limits

Project Activities

- **Project website and communication tools.**
- **Regional and macro-regional cultural & creative tourism (CCT) analysis, stakeholder mapping and engagement plan, and policy pathways design.**
- **Underwater, Cultural, Creative, Science and Silver Tourism (UCCST) model** design with optimisation and sustainability/barriers analysis, action plans per region, and KACs small-scale implementations.
- **Living-lab co-work** for co-creation of business models and tourism products, with training workshops for stakeholders and policymakers.
- **Development of TOURAL digital ICT tools** (simulator, predictive advisor, augmented web platform, VR tools, embryonic data spaces, Product Environmental Footprint (PEF) tools) and **small-scale service validation.**
- **Replication roadmap and policy briefs,** complemented by Policy Round Table outcomes

Project Quote

We advance cultural and creative tourism with a multi-dimensional model to balance growth across rural grids and urban clusters through macro-regional cooperation and integrated value-chains

Geographical Scope

Adriatic-Ionian macro-region (Italy, Croatia, Greece) and Black Sea Basin (Bulgaria, Romania, Ukraine).



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[Click here for the project's website.](#)



NANOCAP Design and Experimental Evaluation of Innovative Processes for Capturing CO₂ and Utilizing it in the Industrial Production of Carbonate Nanoparticle Salts

NANOCAP

Programme Name

Research - Create -
Innovate

Project Budget

869.000,00 €

Project Duration

2018 - 2021

Project Reference
Number / Code

T1EAK-02472



Low Carbon Economy



Resilience and Adaptation to Climate Change



Other: Carbon Management and Storage Technologies,
Circular Economy, Environment and Sustainability

Project Objectives

- The development and experimental validation of a **Rotating Pack Bed** pilot plant.
- Experimental evaluation of CaO and MgO waste gases in a chemical absorption CO₂ unit employing innovative low temperature amines solvents that **reduce the energy requirements of the regeneration process.**
- Optimization and evaluation of the process operation in order to examine the **optimal performance of the corresponding configuration.**
- **Experimental and model-based implementation** in order to identify the impact of several parameters, such as flow rates, concentrations of reactants and centrifugal velocity of RPB, on the size and morphology for the nanoparticle production.
- **Techno-economic analysis** of scale-up process and installation procedure

Lead Organization

Centre for Research and Technology Hellas -
CERTH

Lead Country

Greece

Other Partners

Greece *2

Project Activities

The NANOCAP project developed technologies pertaining to the development of models for amine-based CO₂ capture and CO₂ utilization for the production of carbonate nanoparticles accompanied by innovative process flow sheets operating on novel solvents for CO₂ capture. Pilot plants were designed, constructed and operated in CERTH, while valuable experimental results and techno-economic data were produced.

Target Groups/Beneficiaries

- Cement and Lime Industry – for capturing CO₂ from high-emission production processes.
- Magnesite mining Industry for carbon mineralization and nanoparticle synthesis.

Main Outputs/Results

Modelling Studies

- **An equilibrium-based model** was developed for optimizing CO₂ capture with phase-change solvents. Results showed that the novel mixture S1N/DMCA achieves a CO₂-to-amine ratio of 1.35 (vs. 0.51 for MEA), while reducing regeneration energy by 42–45 %, depending on flue gas composition.
- **A new Rotating Packed Bed (RPB) model** was validated for producing PCC and BMC nanoparticles. It links particle size distribution with operating parameters (e.g. rotor speed, energy use). Optimum conditions yield 9–10.2 nm particles with 77.7–94.6 % CO₂ capture efficiency, at 0.01–0.1 MW/kg slurry.

Experimental Studies

- The S1N/DMCA (3:1) solvent was tested at pilot scale (CERTH). At 3 mol/L, regeneration energy was 2.29–2.50 GJ/ton CO₂, the lowest reported for phase-change solvents, enabled by a 30 % reduction in solvent flow due to phase separation.
- PCC and BMC nanoparticles were produced via slurry carbonation at atmospheric pressure using Ca(OH)₂ and MgO precursors under varied operating conditions.
- PCC powders showed high purity, crystallinity, and particle sizes around 90 nm (crystallites 36.8–47.3 nm).
- A one-step method for BMC synthesis in the RPB produced sheet-like 26–96 nm nanoparticles forming secondary microspheres.
- Both processes achieved >90 % CO₂ capture efficiency with short processing times.

Techno-Economic Studies

- For the S1N/DMCA capture unit, capture costs were <30 €/ton CO₂, a strong improvement vs. MEA (43 €/ton).
- For RPB nanoparticle production, costs were estimated at 1000–2000 €/ton PCC and 200–300 €/ton BMC, depending on scale, slurry concentration, and filtration efficiency. Further cost reductions are possible with higher slurry concentrations.

Commercial Development & Upscaling

- Both CO₂ capture and utilization technologies are considered ready for upscaling to commercial scale, especially the Rotating Packed Bed.

Patents:

- PCT/IB2023/059900
- Patent Application No: 20230100390 – GR

Project Quote

Innovative technology to capture CO₂ and use it for the industrial production of high commercial value products such as calcium carbonate nanoparticles and magnesium carbonate.

Geographical Scope

Greece

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Institution: CERTH / CPERI

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[Click here for the project's website.](#)



Nature of Aquatic Environment: Inclusion and Rising Awareness in Diverse Societies (NIDA)



Programme Name

Erasmus+ KA220-HED

Project Budget

250.000,00 €

Project Duration

2024 – 2027

Project Reference Number / Code

2024-1-TR01-KA220-HED-000251988

Lead Organization

Karadeniz Technical University

Lead Country

Türkiye

Other Partners

Türkiye | Romania | North Macedonia

Priority Area

Other: Environment and Fight Against Climate Change

Project Objectives

The NIDA project aims to raise awareness among university students in Turkey, Romania, and North Macedonia on climate change, aquatic ecosystems, biodiversity, and nature conservation. By developing a educational module, providing trainings, and creating digital learning tools (website and e-atlas), the project seeks to close the awareness gap and promote active environmental citizenship. Through drama, thematic days, and a student congress, it will encourage inclusive participation, lifelong commitment to sustainability, and greater community engagement in protecting aquatic environments.

Project Activities

- Project Management
- Development of NIDA Module
- University Students Trainings
- Creating Digital Learning Tools
- Mobility, Networking, Dissemination, Promotion,

Target Groups/Beneficiaries

- University Students

Main Outputs/Results

The NIDA Project will develop a **training program**, **digital tools** (multilingual website and in e-Atlas), and **innovative methods** such as drama-based learning to raise awareness on **climate change**, **biodiversity**, and **aquatic ecosystems** among university students. Through trainings, thematic activities, and an international student congress, it built capacity, promoted active citizenship, and ensured long-term sustainability through wide dissemination and digital visibility.

Project Quote

NIDA shapes future leaders by raising awareness on aquatic ecosystems and inspiring inclusive, sustainable action among university students.

Geographical Scope

Trabzon/Türkiye, Bitola/North Macedonia,
Constanța/Romania

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[Click here for the project's website.](#)



NISOS



Programme Name

Flagship Actions in Interdisciplinary
Scientific Areas with Special Focus on the
Connection to the Productive Sector

Project Budget

2.457.000,00 €

Project Duration

2023 – 2025

Project Reference Number / Code

TAEDR-0537029

Priority Area



Low Carbon Economy



Resilience and Adaptation to Climate Change



Other: Circular Economy, Sustainable Islands, Education
and Local Engagement

Project Objectives

NHSOS Project aims to develop the know-how, infrastructure, methodology and policies to make the Greek islands "Green". This goal is expected to be achieved through **sustainable development, RES development, energy autonomy and a zero carbon footprint.** The project's pilot actions are focused on 3 Greek islands, Chalki, Antikythera and Kastelorizo.

Lead Organization

CERTH/HIT (Centre for Research and
Technology Hellas /Hellenic Institute of
Transport)

Lead Country

Greece

Other Partners

Greece *5

Project Activities

- Decarbonization & energy autonomy (RES, storage, electrification)
- Water & waste management (circular economy, smart bins, recycling)
- Green mobility (EVs, e-bikes, e-scooters)
- Sustainable tourism (green tourist card, eco-mobility)
- Digital platform for energy, water & environment data
- Consultation tool for local communities
- Pilot installations & evaluation of technologies
- Adoption of EU green policies
- Promotion of green innovation & cooperation

Main Outputs/Results

Key developments are achieved per island:

Island of Chalki: Interactive green Park, EVs, green tourist card

Island of Antikythera: Energy self-sufficient PANGEA Observatory

Island of Kastellorizo: EV charger, green tourist card, knowledge transfer

Target Groups/Beneficiaries

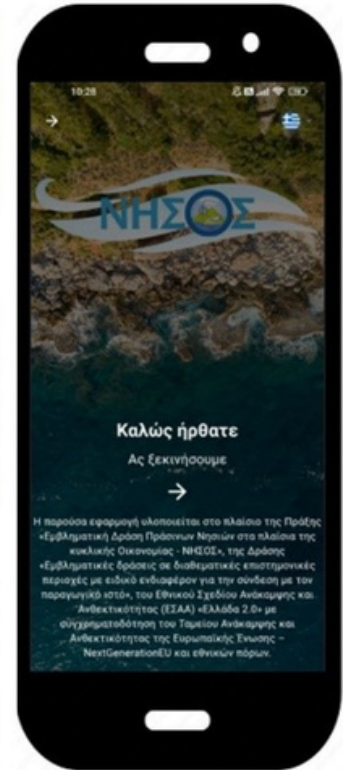
- Researchers
- Universities
- Residents
- Public authorities
- Entrepreneurship in the Energy Sector
- Relevant Stakeholders
- Tourists

Project Quote

NISOS transforms Greek islands into **green, self-sufficient ecosystems** through renewable energy, circular economy and sustainable mobility. It builds know-how, tools and policies to achieve zero carbon footprint and resilient island communities.

Geographical Scope

Starting with the islands of Chalki, Antikythera, and Kastellorizo, with potential for replication across the Dodecanese



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Click here for the project's website.



Non-Invasive Fish Monitoring Network for Reef Fishes in the Black Sea Basin

Programme Name

Interreg BSB 2nd call

Project Budget

14999634,96 €

Project Duration

2025 - 2029

Project Reference Number / Code

BSB01105

Priority Area



Blue Economy

Project Objectives

Overall objective of the WatchReefFish is to standardize, establish, perform, and enhance a cross-border, non-invasive fish monitoring (native and non-indigenous) network for reef ecosystems in the Black Sea. The project aims to **enhance biodiversity protection and designation of new MPAs** by improving understanding of reef fish diversity, promoting sustainable management practices, and driving standardized positive changes in fish assessments, conservation and management.

Lead Organization

Karadeniz Technical University

Lead Country

Türkiye

Other Partners

Türkiye | Greece | Romania | Bulgaria
Georgiea

Project Activities

- Monitoring fish biodiversity in different habitats,
- AI based fish identification
- Dissemination
- Education

Target Groups/Beneficiaries

- Higher education and research groups
- National public authorities
- NGOs
- Training centers and schools
- General public

Project Quote

Despite their importance, reef ecosystems in the Black Sea remain under-studied compared to other marine habitats. There is a lack of comprehensive, standardized data on the biodiversity and health of these reefs, which hinders effective conservation and management efforts. Traditional monitoring methods are often invasive and can disrupt the sensitive habitats, causing fish mortality. The WatchReefFish will address these gaps by deploying non-invasive methods such as Underwater Visual Census (UVC), Baited Remote Underwater Video (BRUV) systems, and environmental DNA (eDNA) analysis. The project seeks to significantly enhance the accuracy of reef fish monitoring while minimizing the impact on marine life and habitats, leading to healthier reef ecosystems, which will deepen our understanding of reef fish ecology and their interactions with the marine environment. This knowledge will inform effective conservation strategies and promote adaptive management of MPAs and designation of new MPAs. Additionally, through targeted awareness campaigns and capacity-building workshops for policymakers and stakeholders, the project will foster the adoption of sustainable fisheries management and marine conservation practices.

Main Outputs/Results

- Organization-Cooperation across borders
- Solutions taken up

Geographical Scope

Black Sea Basin



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Open Innovation Test Bed for Electrochemical Energy Storage Materials - TEESMAT



TEESMAT

Open Innovation Test Bed for Electrochemical Energy Storage Materials

Programme Name

Horizon 2020

Project Budget

13.000.000,00 €

Project Duration

2019 – 2022

Project Reference Number / Code

Grant Agreement No. 814106

Priority Area



Resilience and Adaptation to Climate Change



Other: Innovation & Technology Transfer

Project Objectives

TEESMAT aimed to establish an **Open Innovation Test Bed (OITB)** for the development and industrialisation of electrochemical energy storage materials. The project provided SMEs and industries with access to advanced characterisation, modelling, and prototyping services for battery technologies. By fostering **technology transfer and innovation** uptake, TEESMAT accelerated the deployment of new energy storage solutions, supporting the EU's low-carbon transition and competitiveness.

Lead Organization

National Institute for Research and Development in Electrical Engineering (ICPE-CA), Romania

Lead Country

Romania

Other Partners

19 organisations from 8 countries, including research institutes, universities, SMEs, and industrial partners (e.g., CEA France, Fraunhofer Germany, Varta Microbattery Germany, Solvay Belgium).

Project Activities

- Creation of a sustainable **Open Innovation Test Bed** for electrochemical energy storage.
- Development of advanced **characterisation and modelling techniques**.
- Pilot-scale validation of **energy storage materials and devices**.
- Provision of services for SMEs to accelerate **technology uptake**.
- Establishment of a **governance and business model** for long-term OITB sustainability.

Target Groups/Beneficiaries

- SMEs,
- Large industries
- Research organisations
- Policy-makers
- Energy technology clusters

Main Outputs/Results

- Functional OITB platform integrating facilities across Europe.
- Catalogue of services for SMEs and industries (testing, characterisation, modelling).
- Demonstrated pilot projects for battery and energy storage innovation.
- Strengthened European value chain for electrochemical energy storage.
- Transfer of technology from research labs to industrial applications

Project Quote

TEESMAT bridged the gap between research and industry by enabling SMEs to access advanced testing and accelerate innovation in energy storage.



Remarks/Additional Notes

- One of the largest Horizon 2020 projects coordinated by Romania in advanced materials.
- Provided SMEs with first-time access to a European-wide Open Innovation Test Bed.
- Contributed directly to EU's Energy Union objectives and the European Green Deal.
- **Created long-term TT infrastructure for electrochemical energy storage technologies.**

Geographical Scope

Pan-European (Romania, France, Germany, Belgium, Finland, Switzerland, UK, Italy).

Institution: National Institute for Research and Development in Electrical Engineering (ICPE-CA), Romania

E-mail address: secretariat@icpe-ca.ro

[Click here for the project's website.](http://www.teesmat.eu)



Physical Internet and the Key Steps to Innovation-Driven Supply Chain Transformation Towards Green, Affordable, Scalable and Collaborative Zero-Emissions Freight Transport Solutions



Programme Name

Horizon Europe

Project Budget

3,999,998,75 €

Project Duration

2016 – 2020

Project Reference
Number / Code

676754-2

Priority Area

Other: Green and Sustainable Logistics

Project Objectives

IKIGAI project's main goal is to accelerate the realization of the Physical Internet (PI) by 2040 and achieve decarbonized freight transport and logistics by 2050. It will achieve this by scaling up five complementary Logistics Innovations (LIs) and testing them in real-world pilot scenarios. The project focuses on **establishing affordable, collaborative, and coordinated logistics networks** across Europe through open, standardized processes that enhance efficiency and reduce emissions. Ultimately, IKIGAI will **re-engineer key supply chain services** like volume pooling, warehousing, and last-mile delivery to drive a systemic change toward net-zero logistics.

Lead Organization

FIT Consulting SRL

Lead Country

Italy

Other Partners

Greece *7 | Italy *3 | Belgium *5 | Germany *4 | Spain *6 | France *5 | Luxembourg Netherlands | Switzerland

Target Groups/Beneficiaries

- Companies
- Researchers
- Universities
- Public authorities



Project Activities

- A **"Rulebook"** and **"PI Readiness Level Mapper"** for assessing and scaling logistics innovations.
- **"PI Norm"**, a set of new standardized processes and procedures to enhance collaboration and logistics efficiency.
- **Five real-world pilots** across Europe demonstrating and auditing new Logistics Innovations in live industrial settings.
- A **"Twin Transition Genome"** roadmap that integrates collaborative logistics with freight decarbonization pathways.
- **"PI Coalition"**, an industry-led governance body to foster collaboration, standardization, and the adoption of Physical Internet principles.
- An **"Impact Augmenter Kit"** for maximizing project results through targeted dissemination, communication, and networking activities.
- Inclusive onboarding mechanisms with collaboration agreements to facilitate the **adoption of innovations** by new companies, particularly SMEs.

Main Outputs/Results

Developed Solution

PI Readiness Level Mapper: An assessment framework with integrated tools to evaluate maturity, solution performance and adoption potential of logistics innovations, considering factors beyond technology readiness such as commercial, societal, and regulatory dimensions.

Project Quote

We work for a better future, fostering collaboration rooted in respect and trust, recognizing the worth of every action.

Geographical Scope

- France: Paris
- Spain: Barcelona
- Poland-Italy Corridor: Gliwice - Piacenza
- Greece: Piraeus, Athens
- Belgium - Germany

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POSEIDON - Propulsion of Ships with E-Methanol in Favour of the Decarbonisation of Naval Transport



Programme Name

Horizon Europe

Project Budget

12.629.642,50 €

Project Duration

2023 - 2027

Project Reference
Number / Code

101117616



Low Carbon Economy



Resilience and Adaptation to Climate Change



Other: Renewable Energy Sources, Sustainable,
Secure and Competitive Energy Supply.

Project Objectives

POSEIDON project aims to advance the use of e-methanol as a sustainable shipping fuel by demonstrating innovative CO₂ valorisation routes and a hybrid Power-to-e-Methanol technology under real operating conditions. It seeks to validate the produced e-fuel in marine engines and a pilot vessel, while assessing environmental, social and economic impacts through case studies and simulations. The project also **fosters collaboration with ports and stakeholders in Valencia and Thessaloniki**, develops tools and roadmaps for EU-wide deployment, and provides policy recommendations to accelerate market uptake of renewable e-fuels.

Lead Organization

Eifer Europäisches Institut Für Energieforschung
Edf Kit Ewiv (EIFER)

Lead Country

Germany

Other Partners

Greece *4 | Sweden | France | Germany *3
Italy *4 | Spain *3

Target Groups/Beneficiaries

- Shipping companies and ship operators.
- Port authorities.
- E-fuel producers and technology developers.
- CO₂ emitting industries (biogenic and non-biogenic).
- Policy makers and regulators.
- Local communities and society in general

Project Quote

e-methanol for the decarbonization of the shipping sector. Promoting application through detailed assessments of local value chains in the ports of Valencia and Thessaloniki.

Geographical Scope

Europe (mainly Greece, Spain, Germany, France)

Main Outputs/Results

- **Improved renewable fuel technologies:** more cost efficient and performant technologies for e-methanol production, storage, distribution and end-use based on EU research and innovation.
- **Value chain implementation:** two value chains implemented in the ports of Thessaloniki and Valencia based on POSEIDON research outputs.
- **E-methanol becomes a standard marine fuel:** new built maritime ships equipped with 2-stroke and 4-stroke e-methanol engines.
- **Ports as e-methanol hubs:** deployment of an infrastructure for e-methanol production, storage and distribution in the main EU ports.
- **Enabling environment:** favourable regulatory framework and new standards for the use of e-methanol onboard ships and the safe production, transport and distribution of renewable fuels in EU.
- **Social acceptance:** EU citizens are better informed about the benefits of e-methanol as renewable marine fuel thanks to a targeted communication campaign.

Project Activities

- Exploring new **technical and economic pathways** to utilize **biogenic and unavoidable industrial CO₂ sources** as feedstock for e-methanol production.
- Assessing the **impacts of value chain**
- implementation in the **case studies** of Thessaloniki and Valencia through detailed technical, economic, environmental and social analyses.
- **Scaling up of an innovative TRL7 Power-to-Methanol pilot plant** capable of producing up to 750 liters of e-methanol per day from CO₂, H₂ and renewable power.
- **Qualifying 2-stroke and 4-stroke internal combustion engines** to operate on e-methanol.
- Developing a **new modeling tool to evaluate different e-methanol-based value chains and assess their impacts.**
- **Establishing local Communities of Practice (CoPs)** in Valencia and Thessaloniki to strengthen cooperation among partners and pave the way for the future implementation of innovative renewable fuel value chains.

Name: Dimitris Koutsonikolas

Institution: CERTH

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[Click here for the project's website.](#)



Predicting Distribution of Future Basic Forest Tree Species Using Different Climate Projections and Developing Adaptation Strategies for Türkiye



Programme Name

Climate Change Adaptation
Grant Programme (CCAGP) -
EuropeAid /170484/ID/ACT/TR

Project Budget

196.984,86 €

Project Duration

2023 – 2025

Project Reference Number / Code

TR2017 ESOP MI A3 04
/ CCAGP / 611

Priority Area



Resilience and Adaptation to Climate Change

Project Objectives

Estimating the future tree species distribution, mapping forest lands that will be most affected from climate change and **investigating tree species** that will be able to adapt climate change, by using regional climate models throughout the country, and developing climate change adaptation strategies based on forest management and silviculture, and extending the knowledge base within the foresters and the society.

Lead Organization

Marmara Forestry Research Institute

Lead Country

Türkiye

Other Partners

Türkiye *2

Project Activities

- **Estimating future climate conditions** by regional climate modelling for the period 2020-2100 under RCP4.5 and RCP8.5 scenarios
- **Analysing the habitat suitability** for both current basic and tolerant appropriated tree species for the next 80 years
- **Mapping** the future tree species mixture
- **Identifying/classifying** the most affected areas/regions by climate change
- Development of **management and silvicultural adaptation strategies**

Main Outputs/Results

- Bioclimatic parameters, projected taking into account **two different emission scenarios** (SSP2 and SSP3),
- Future forest tree species **distribution maps** (for each basic species),
- Future tree species **composition maps** (pure, mixture, not suitable etc.) for the future selected periods,
- **Climate change classification maps** showing the impact of climate change,
- **Adaptation strategies** based on forest management and silviculture for the classified impacts,
- A **website** where maps can be downloaded and made available to target groups and beneficiaries
- Nearly 200 people will receive **training** for two days (50 people for each workshop) on maps and strategies developed within the scope of the project.

Project Quote

The prepared project has, for the first time in Türkiye, projected future tree species distributions for 23 different tree species simultaneously using climate variables generated by this project and considering two different climate scenarios (SSP2) and (SSP3), employing Biomod2 and MaxEnt software.

Target Groups/Beneficiaries

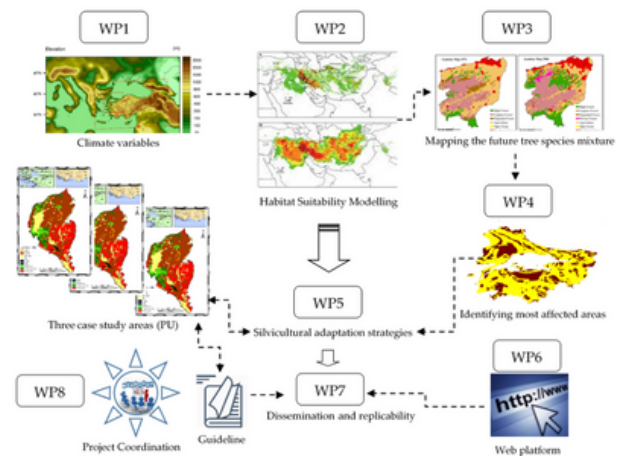
- Forest management planners
- Practitioners
- Forest managers
- City planners
- Universities (both for research and education)
- Research institutions
- The society

Remarks/Additional Notes

A separate presentation has been requested to be made to the headquarters management team by the Turkish forest service (General Directorate of Forestry).

Geographical Scope

Türkiye, 7 geographical regions



Name: Assoc. Prof. Uzay Karahalil

Institution: Karadeniz Technical University

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[Click here for the project's website.](http://www.ktu.edu.tr/~uzay)



Public-Private Partnership and Transnational Exchange for Better Labour Market Governance to Effectively Tackle Negative Impacts of Demographic Change in the Danube Region - ANCHOR

Programme Name

Horizon Europe

Project Budget

3.999.998,75 €

Project Duration

2016 – 2020

Project Reference
Number / Code

676754-2

Priority Area



Other: (Describe it with at least 1 keyword) Labour Market Governance, Demographic

Project Objectives

ANCHOR project aims to strengthen labour market governance in the Danube Region to effectively tackle the negative impacts of demographic change, including ageing population, labour shortages, unemployment, brain drain, and exclusion of vulnerable groups. The project focuses on creating strategies, innovative solutions, and governance models that can be shared across borders.

Lead Organization

Hálózat a Regionális Fejlesztésért Alapítvány

Lead Country

Hungary

Other Partners

Bulgaria | Slovenia | Bosnia and Herzegovina
*2 | Austria | Croatia | Serbia | Ukraine
Hungary

Project Activities

- Development of a **transnational labour market strategy and local action plans**
- Testing **innovative governance tools** (co-branding jobs, workplace attractiveness programs)
- **Skill-building workshops** for vulnerable groups and employer integration programs
- Drafting a **Practical Guide and Policy Recommendations** for improved labour market governance
- **Transnational knowledge exchange and stakeholder workshops**

Main Outputs/Results

- Transnational labour market governance strategy
- Local and regional action plans
- Innovative tools for job attractiveness and integration of vulnerable groups
- Practical Guide on improved labour governance
- Policy recommendations for national and transnational uptake
- Strengthened institutional capacity and cross-sector cooperation

Project Quote

ANCHOR builds strong labour market governance in the Danube Region by addressing demographic challenges with innovative solutions that strengthen social cohesion and ensure sustainable economic growth.



Target Groups/Beneficiaries

- Labour market institutions
- Public authorities
- Employers
- SMEs
- NGOs
- Educational institutions
- Vulnerable jobseekers (e.g. elderly, people with disabilities, marginalized groups), policymakers

Remarks/Additional Notes

- Anchors cooperation between public and private actors in labour governance.
- Focuses on demographic change as a cross-cutting challenge in the region.
- Outputs designed for scalability and replication across Europe.

Geographical Scope

Danube Region (8 countries, 12 partners + 7 ASPs)

Name: Project Coordination Unit - Emőke VIGH

Institution: Hálózat a Regionális Fejlesztésért Alapítvány

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Click here for the project's website.



Reliable and Efficient Dual Fuel System for Civil Protection during Natural Disasters using HT-PEM Technology - RESCUE

RESCUE

Programme Name

HORIZON-JTI-
CLEANH2-2024

Project Budget

4.983.490,08 €

Project Duration

2025 – 2028

Project Reference Number / Code

GA 101192169

Priority Area



Resilience and Adaptation to Climate Change

Project Objectives

The project is about the development and the demonstration of a fuel cell system which allows the operation using 100% of hydrogen and additionally using methanol and assures 50 kW of electrical power. The containerised and modular design in combination with the dual fuel approach leads to an application flexibility for various important facilities during natural disasters like the civil protection with different energy requirements. The HTPEM technology is characterised by increased operating temperature of around 160 °C and enables a simplified cell design and operation regarding water management, heat rejection and direct use of reformates.

Lead Organization

DLR (GER): DEUTSCHES ZENTRUM FÜR LUFT –
UND RAUMFAHRT EV

Lead Country

Germany

Other Partners

Greece*3 | Germany | Denmark

Project Activities

- System requirements
- Dual fuel FC module constructed and tested
- FC and fuel container constructions
- System integration
- Safety and transport certification requirements
- Demonstration
- Testing for at least 2,000 hours on site
- State-of-Health, fuel flexibility
- Dissemination and exploitation

Project Quote

Reliable and Efficient Dual Fuel System for Civil Protection during Natural Disasters using HT-PEM Technology develops and demonstrates a dual-fuel FC system which allows the operation using 100% of hydrogen and additionally using methanol and assures 50 kW of electrical power.



Main Outputs/Results

Jointly Designed and Developed solution

Target Groups/Beneficiaries

- Civil protection
- Army
- Remote applications

Geographical Scope

Greece and Germany

Name: Dr. Dana Schonvogel

Institution: DLR

E-mail address: RESCUE@dlr.de

[Click here for the project's website.](#)



Sea Balance - Active Control Ship Stability System



Sea Balance

Programme Name

1501 - Industrial R&D
Projects Grant Programme

Project Budget

140.000,00 €

Project Duration

2022 - 2025

Project Reference Number / Code

3220059

Priority Area



Blue Economy

Project Objectives

15% speed increase, 12-15% fuel saving, 80% trim control, 60% roll control, a more comfortable and safe cruise, 90% reduction in seasickness on passengers.

Lead Organization

SM Marine Mechatronic Engineering

Lead Country

Türkiye

Project Activities

- The Project Covers Design & Modelling
- CFD Analysis
- Control Software Development
- Eco-Material (Hemp Composite) Application
- Prototype Production
- Real Sea Validation.

Target Groups/Beneficiaries

- Boat owners
- Shipyards
- Ship-owners
- Public institutions
- Military institutions

Main Outputs/Results

Performance Outcomes

- Up to 12% speed increase.
- 10–15% fuel savings.
- 75–80% trim angle control.
- 60% roll reduction while sailing.
- 80% roll reduction at anchor.
- Increased comfort, safety, and maneuverability.

Academic Outputs

- **1 PhD thesis**
- Multiple **international journal papers and conference proceedings.**
- **Patent applications** for fin design and hemp-composite application.

Training & Expertise

- **Strengthened expertise in CFD, marine control systems, and eco-composite applications.**
- **Knowledge transfer** to shipyards, maritime firms, and defense industry stakeholders.

Economic & Social Impacts

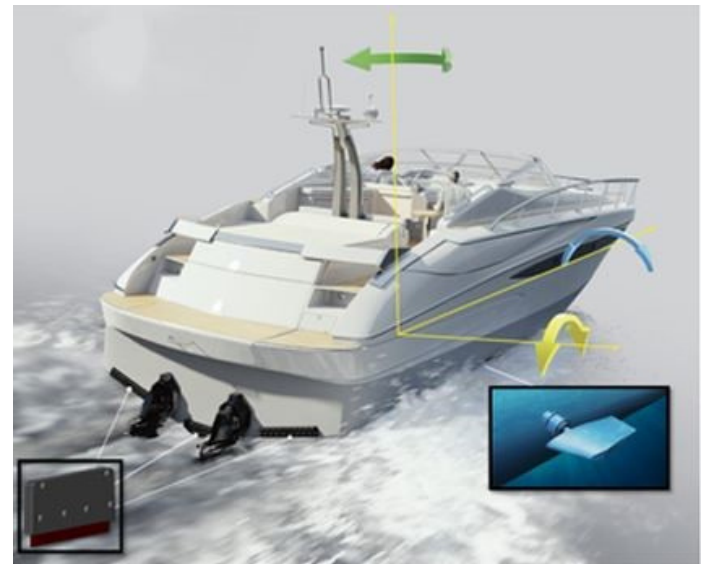
- **First eco-friendly hemp composite-based stabilizer system in the maritime sector.**
- **Reduction of import dependency** on high-tech marine stabilization systems.
- **Commercial-ready system (TRL 9)** at project end.
- Contribution to **EU Green Deal goals** (CO₂ emission reduction, sustainable materials).

Project Quote

This project pioneers the world's first hemp-reinforced composite fin stabilizer system, merging sustainability with advanced marine control. It strengthens local innovation, reduces import dependency, and positions our region as a leader in eco-friendly maritime technologies.

Geographical Scope

Türkiye



Name: Ömer Sinan ŞAHİN

Institution: SM Marine Mechatronic Engineering

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[Click here for the project's website.](#)



Shifting to Zero-Emission Logistics with Right-Sized, Mission-Focused, N1 eLCVs.



Programme Name

Horizon Europe -
Innovation Actions

Project Budget

9.999.992,00 €

Project Duration

2025 - 2028

Project Reference
Number / Code

Grant agreement ID:
101192375

Priority Area



Low Carbon Economy

Project Objectives

- **Shift2Zero (S2Z)** aims to accelerate the transition to zero-emission urban logistics by developing right-sized, mission-focused N1 electric light commercial vehicles (e-LCVs).
- Project will **co-design novel vehicle concepts**, including modular cargo bodies and dual passenger-freight transport solutions, tailored to the needs of logistics operators.
- **Prototypes will integrate advanced control strategies to improve efficiency, reduce non-exhaust emissions, and enhance safety, tested in six real-life pilot sites across Europe.**
- By combining multi-purpose and design-for-purpose vehicle platforms with **new business models and governance tools**, S2Z will enable scalable, cost-effective, and sustainable adoption of e-LCVs in urban logistics.

Lead Organization

FUNDACIO EURECAT

Lead Country

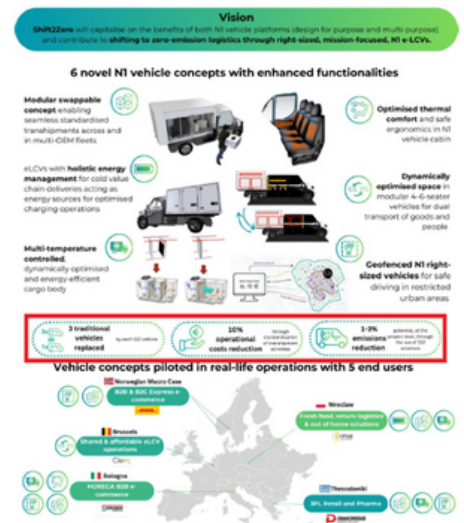
Spain

Other Partners

Greece *3 | Spain *3 | Belgium *3 | Italy *8
Norway *4 | Poland *4 | France *2 | Germany
Austria | The Czech Republic

Target Groups/Beneficiaries

- Companies
- Researchers
- Universities
- Public authorities



Project Activities

- User-centric requirements definition through stakeholder mapping, in-depth **interviews, and co-creation workshops** to guide all vehicle development.
- **Co-development and prototyping of six novel N1 e-LCV concepts** with enhanced functionalities, including modular cargo bodies, optimized thermal comfort, and dual transport of people and goods.
- **Design of tailored vehicle control strategies** that integrate innovations in tyres and regenerative braking to maximize energy efficiency and reduce non-exhaust particle emissions.
- **A digital platform** that integrates a decision analytics toolkit with a suite of optimization algorithms to help fleet managers enhance operational efficiency. The system gathers diverse data streams (e.g. vehicle status, delivery orders, and traffic conditions) to optimize vehicle routing, charging schedules and overall mission planning
- **Real-life demonstrations of four physical prototypes** across six European pilot sites, complemented by large-scale digital simulations to assess operational performance and scalability.
- **Holistic impact assessment** of the new vehicles and operations, including a full Life Cycle Assessment (LCA), Total Cost of Ownership (TCO) analysis, and evaluation of societal and safety impacts.
- Development of a **route-to-market roadmap** through policy guidelines, validated business cases, stakeholder training, and targeted dissemination to ensure widespread adoption.

Main Outputs/Results

Developed Solution

- **Fleet Management Models Toolbox:** aims to support enhanced, data-driven decision-making for electric light commercial vehicle (eLCV) operations in urban logistics. The toolbox consists of modular engines designed to optimize core fleet management processes such as routing, energy planning, loading, performance monitoring, and scenario simulation. It integrates technical, operational, and economic data to optimize delivery flows, reduce energy consumption, and improve service reliability.

Project Quote

“Shift2Zero bridges the gap between urban logistics needs and climate targets by co-developing right-sized, mission-focused e-LCVs. With real-life pilots and strong industry collaboration, we drive scalable zero-emission last-mile logistics across Europe.”

Geographical Scope

Norway: Bergen and Oslo
Belgium: Brussels
Greece: Thessaloniki
Italy: Bologna
Poland: Wrocław

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Institution: CERTH

E-mail address: zisismaleas@certh.gr

[Click here for the project's website.](#)



SIBILA – Innovative Training Programme Towards the Integration of Competitive Intelligence and Technology Watch Practices and Methods in SMEs from Manufacturing Sectors



SIBILA

Programme Name

Erasmus+ – Key Action:
Cooperation Partnerships in VET

Project Budget

261.246,00 €

Project Duration

2022 - 2024

Project Reference Number / Code

2021-1-FR01-KA220-
VET-000034819

Priority Area

Other: Innovation Management; Vocational Education

Project Objectives

SIBILA is designed to equip SMEs, **particularly in furniture, textile and traditional manufacturing sectors**, with Competitive Intelligence and Technology Watch skills. **Its goal is to help SMEs monitor their environment, anticipate market and technological changes, reduce risk, seize innovation opportunities, and integrate innovation-management practices**

Lead Organization

Université de Strasbourg

Lead Country

France

Other Partners

Bulgaria | Spain | Czech Republic | Poland *2

Project Activities

- Development of **training modules** on competitive intelligence & technology watch
- **Surveys** to assess readiness and identify knowledge gaps in SMEs in different countries
- **Workshops and practical training** for SME staff in furniture and textile sectors
- **Creation of tools:** self-diagnostic tools, learning platforms, training materials

Target Groups/Beneficiaries

- SMEs In Furniture and Textile Sectors
- Vocational Education Providers
- Innovation Support Organisations
- SME Staff and Leadership,
- Trainers
- Policy-Makers in VET Sector

Main Outputs/Results

- **Training programme & modules** tailored for SMEs in traditional manufacturing sectors
- **VET-oriented course content**, defined learning outcomes for Technology Watch, Competitive Intelligence
- **Enhanced capacity of SMEs** to monitor market & technology trends, make proactive decisions

Project Quote

Former les PME européennes à la veille : le défi du projet Erasmus+ SIBILA" ("Training European SMEs in watch/monitoring: the challenge of SIBILA") — reflecting its purpose to build vigilance and innovation capacity.

Remarks/Additional Notes

Work includes survey results that define learning outcomes for future VET courses; addresses crucial need for traditional manufacturing SMEs to modernize via intelligence and tech awareness; strong cross-border partnership.



Geographical Scope

France, Poland, Spain, Czech Republic, Bulgaria; EU-wide relevance for similar traditional manufacturing sectors

Institution: Université de Strasbourg

E-mail address: languesvivantes@unistra.fr

[Click here for the project's website.](https://www.sibila-project.eu/)



Strengthening Smart Specialisation by Fostering Transnational Cooperation - GoSmart BSR



Programme Name

Interreg Baltic Sea
Region 2014-2020

Project Budget

1.760.000,00 €

Project Duration

2017 - 2021

Project Reference Number / Code

Interreg BSR Project
No. #R077

Priority Area



Low Carbon Economy

Project Objectives

GoSmart BSR aimed to strengthen regional innovation ecosystems by enhancing the implementation of Smart Specialisation Strategies (RIS3) through transnational cooperation. It created a Transnational Innovation Brokerage System (TIBS) to connect SMEs with research and technology centres, boosting internationalisation and technology transfer. The project promoted collaboration between regions, helping businesses adopt innovative solutions and access new markets.

Lead Organization

North-East Regional Development Agency
(ADR Nord-Est), Romania

Lead Country

Romania

Other Partners

Research Institutes | Innovation Agencies
Development Organisations from Poland | Latvia
| Lithuania | Estonia | Finland | Germany
Denmark

Project Activities

- **Creation of the Transnational Innovation Brokerage System (TIBS)**
- Support for SMEs to **access innovation services and cross-border markets**
- Development and implementation of **regional innovation pilots**
- **Strengthening Smart Specialisation Strategies (RIS3)**
- Knowledge sharing and capacity building through **workshops and training**

Target Groups/Beneficiaries

- SMEs
- Technology transfer offices
- Research institutes
- Innovation agencies
- Policy-makers
- Regional authorities

Main Outputs/Results

- **Functional Transnational Innovation Brokerage System (TIBS)**
- **Increased cooperation** between SMEs and research organisations
- **Cross-border innovation pilots** tested in partner regions
- **Enhanced RIS3 implementation** in participating countries
- **Strengthened role of regional development agencies in technology transfer**

Project Quote

GoSmart BSR connected SMEs with innovation ecosystems across borders, proving that smart specialisation works best through cooperation.

Remarks/Additional Notes

Recognised as a best practice in RIS3 internationalisation.

Led by Romania (ADR Nord-Est), highlighting national expertise in innovation management.

Strong technology transfer component through TIBS and SME pilots.

Strengthened Romania's visibility in the Baltic Sea Region innovation community.

Geographical Scope

Baltic Sea Region with partners from Romania, Poland, Latvia, Lithuania, Estonia, Finland, Germany, and Denmark.

Institution: North-East Regional Development Agency (ADR Nord-Est), Romania

E-mail address: office@adrnordest.ro

[Click here for the project's website.](#)



Sustainable Processes and Optimized Technologies for Industrially Efficient Water Usage – SPOTVIEW



Programme Name

Horizon 2020

Project Budget

8.122.039,00 €

Project Duration

2016 – 2020

Project Reference
Number / Code

723577

Priority Area



Resilience and Adaptation to Climate Change



Other: Circular economy, sustainable industry

Project Objectives

Objective of the SPOTVIEW project is to develop and demonstrate innovative, sustainable and efficient processes and technology components, in order to optimize the use of natural resources, especially water, in three industrial sectors (Dairy, Pulp and Paper and Steel) contributing to 44% of industrial water usage in EU.

Lead Organization

Centre Technique Del Industrie Desapiers
Cartons Et Celluloses

Lead Country

France

Other Partners

Greece | Belgium | United Kingdom | Finland
*4 | Spain *2 | France *2 | Germany
Luxembourg

Project Activities

- **Testing technologies components** in realistic environment
- **Technologies assembling** in simulated or operational environment
- **Demonstration of technologies** in real operational environment
- **Environmental and techno-economic evaluation of the proposed technologies**
- **Maximize the outreach and impact of innovations** of the SPOTVIEW in terms of enhanced market and business opportunities, growth and jobs in Europe, and dissemination of non-proprietary results

Main Outputs/Results

SPOTVIEW taking benefits of the **various water management practices** in the different industrial sectors (Dairy, Pulp and Paper, Steel) and favouring knowledge and knowhow exchanges in order to combine existing and novel technologies (total of 14 technologies was assessed in 9 distinct applications) contributed to **minimizing the use of fresh water, energy and chemical additives** in the manufacturing of dairy, paper and steel products.

Project Quote

Resource optimization (including water, energy, raw materials and additives) is a key issue for competitiveness and sustainability.

Geographical Scope

All EU countries

Target Groups/Beneficiaries

- Industries
- Researchers
- Universities
- Public authorities



Name: Eric Fourest

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Industrie Desapapiers Cartons Et Celluloses

E-mail address: Eric.Fourest@webCTP.com

[Click here for the project's website.](#)



Turning Food Waste into Sustainable Soil Improvers for Better Soil Health and Improved Food Systems -Waste4Soil



Programme Name

HORIZON-MISS-2022-
SOIL-01-02

Project Budget

7.350.611,25 €

Project Duration

2023 - 2027

Project Reference Number / Code

101112708

Priority Area



Resilience and Adaptation to Climate Change



Other: Circular economy, environment protection

Project Objectives

- 7 Soil Health Living Labs across Europe, in Greece, Finland, Spain, Poland, Hungary, Italy and Slovenia
- Optimize collection and understanding of 8 types of food processing residues (FPR) for **successful valorisation into Soil Improvers**
- **10 technological and methodological solutions** for recycling food processing residues from the food industry into local, biobased circular soil improvers for improved soil health
- Formulate 6 eco-friendly, viable and local Soil Improvers with **useful guidelines**
- **5 standards supporting transition** towards circular food systems & soil health with recycled FPR and locally sourced soil improver.
- User-driven standardised **Evaluation Framework** to support stakeholders from the food value chain

Lead Organization

Center for Research and Technology Hellas-
CERTH

Lead Country

Greece

Other Partners

Ania | Lab | Soilfood | Irta | Unipr | Areflh
Leitat | Sede/Veolia | 3r Biophosphate | Itene
Legacoop | Wings | Wagenigen University
Confagricoltura | Biomasa Peninsular | lung-
Pib | Clube | Diadyma | Koto Doo Gesco
Univerza V Ljubljani | Bzn | Savonia | Csic
Koper | Egy | Fibl

Target Groups/Beneficiaries

- Researchers
- Universities/Academia
- Food Industry
- Farmers
- Soil improver manufacturers
- Waste managers
- Biogas plants
- SMEs
- Public authorities
- NGOs
- Citizens

Geographical Scope

Targeted actions within the EU with projection
for potential future global implementation

Project Quote

Transforming food processing residues (FPR) into
soil improvers through a circular, systemic and
multi actor approach at regional level.

Project Activities

- **Waste4Soil project aims at developing applicable recycling technical pathways to transform food processing residues (FPR) into soil improvers, through a circular, systemic and multi actor approach** (7 Living Labs in 7 different EU countries) at regional level involving all food chain actors, thereby closing specific loops (nutrients, organic matter, water).
- To optimize food processing residues (FPR) valorisation from source, the Waste4Soil project will design a **waste management guideline** to understand and conserve FPR's streams, while avoiding external pollutant and deterioration.
- To be relevant, the whole soil improvers production system must be in line with farmers' needs and with food industry resources, while being environmentally sustainable, economically viable and socially acceptable. This last point implies a **genuine involvement of citizens in the project implementation**.
- The project supports food systems with **easy and clear solutions, processes and strategies**, going beyond the specific location and its pedo-climatic conditions, the local waste management systems or regulation.
- To do so, standards will be developed to answer practitioners needs and ease the application of the solutions.
- Project covers a great variety of FPR: fruits and vegetables, olive oil residues, wine industry, meat industry by-products, dairy products, cereals and fish.
- **Covering a broad range of FPR is key**, because they do not have the same impacts and potential. FPR will be characterised in terms of bulk composition, also to determine the preferred way to valorise them. The developed methodology is meant to be spread to improve FPR knowledge across Europe.

Main Outputs/Results

Project is still running. **Main technologies that are being investigated** are the processing of food industry residues via:

- Anaerobic Digestion And Further Processing Of The Digestate Via Different Routes
- Composting
- Pyrolysis
- Protein Hydrolysates Production
- Microalgae Processing
- The Soil Improvers That Are Developed Are Applied In Field Trials In Real Scale And Real Environmental Conditions In Each One Of The 7 Living Labs.
- In Addition A Digital Platform Is Developed For The Collection Of Food Industry Waste Management Data, As Well As A Mobile App Will Facilitate Communication Between The Food Industry, Waste Managers, Soil Improver Producers And Farmers For The Transportation And Use Between Potential Stakeholders. Furthermore A Digital Tool For The Evaluation Framework Is Developed To Allow For All Stakeholders And All Potential Actors To Contribute To The Optimization Of The Overall Process Of The Food Waste Valorization Within The Food Value Chain And Its Widespread Application For Soil Health Improvement.

Moreover, **Different Business Models Are Developed Based On The Different Cases That Are Being Investigated In The Project**

Name: Kyriakos Panopoulos

Institution: Center for Research and Technology Hellas

E-mail address: panopoulos@certh.gr

[Click here for the project's website.](#)



Valorization of the TOSOH HELLAS Industrial Solid Waste for the Production of a Valuable Magnetic Material WASTE-MAGNET



Programme Name

National Program (ESPA
- EPAvEK 2014-2020)

Project Budget

599.319,00 €

Project Duration

2019 – 2023

Project Reference Number / Code

T6YBP-00010

Priority Area



Other: Waste-recycling

Project Objectives

Development of an **innovative method** which utilizes the solid industrial waste of the company TOSOH Hellas through its conversion into magnetic material which will be produced in large quantities, at very low cost and can be used for the magnetic shielding of large scale stationary Wireless Charging devices or of a wide network of Electric Vehicle Wireless Charging system installed in highways

Lead Organization

Laboratory of Inorganic Materials - Chemical
Process and Energy Resources Institute -
Centre for Research and Technology Hellas

Lead Country

Greece

Other Partners

Greece *3

Project Activities

- Presentation of **new technology** with on-site demonstration of wireless vehicle charging at exhibitions, research events and conferences
- **Practical exercises for students** in collaboration with industry to familiarize them with this new vehicle charging technology

Target Groups/Beneficiaries

- Researchers
- Industry
- Environmental authorities

Main Outputs/Results

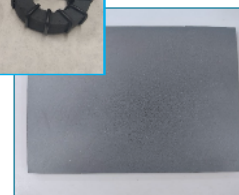
- **Reports** on the specialized ceramic process for converting waste into a magnetic material with a spinel (ferrite) structure
- **Design of wafer** for pilot production and testing
- **Recording of environmental parameters** of waste before and after chemical conversion
- **Pilot production unit** for ceramic products
- **Design and construction of a special device for wireless charging** of an electric vehicle with proper placement of the ceramic wafer for performance optimization.
- **Creation of a website** to disseminate the results
- **Publications** in international journals

Project Quote

The project utilizes a very large amount of solid waste and transforms it into useful material by developing a new innovative technology. This contributes to environmental protection and energy savings, strengthening the circular economy and green transportation.

Geographical Scope

Greece (Thessaloniki, Athens)



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Click here for the project's website.



VERDEinMED: PreVEnting and ReDucing the Textiles Waste Mountain in the MED Area

VERDEinMED

Programme Name

Interreg Euro-MED
Programme

Project Budget

2.848.602,00 €

Project Duration

2024 – 2026

Project Reference Number / Code

Euro-MED0200343

Priority Area



Other: Circular economy

Project Objectives

Focusing on the Textile & Clothing sector, VERDEinMED presents an analytical framework to study the successful implementation of circular business models, identifying the needs of involved actors in terms of business model innovation, technological and social innovation, and enabling conditions of policy and behavioral change, by creating knowledge and capacities at involved and interested parties to recognize the urgency of action and the possibilities to gain momentum and drive a shift in consumption and production practices.

Lead Organization

CERTH – The Centre for Research & Technology, Hellas – Greece

Lead Country

Greece

Other Partners

Bulgaria | Greece | Spain *2 | Italy *2
Portugal | Slovenia | North Macedonia

Project Activities

- Creation of a **Knowledge Platform**
- Establishment of **7 National Hubs**
- **Living Labs and communication campaigns** rolled out across partner regions targeted to consumers
- **Technical Assistance Service** to selected companies
- 7 Thematic - **train the trainer – workshops**
- **Capacity building** for public authorities
- **Policy recommendations & regional/national strategies**

Target Groups/Beneficiaries

- Local, regional and national public authority,
- SMEs & larger businesses
- Interest groups including NGOs
- Higher education and research organisations
- General public

Main Outputs/Results

Jointly developed solutions

Support Service: Technical support for SMEs, start-ups, and RTOs; promotion of conscious consumption and co-creation for consumers; evidence-based, demand-driven policies for policy makers.

Organisations cooperating across borders

Collaboration network of 4-helix actors in the T/C field. Agreements will foster partnerships, international commercial deals, joint research, and market uptake plans.

Knowledge platform

A digital hub under VERDEinMED for sharing experience, information, and tools, acting as a catalyst for change for businesses, consumers, researchers, and authorities.

7 Thematic train-the-trainer workshops

- Workshop 1 – Global Dimension of Textiles – Examining the global impact, trends, and challenges within the textile industry;
- Workshop 2 – Eco-design Strategies – Introducing design approaches that minimize environmental impact;
- Workshop 3 – Circular Business Models – Exploring business strategies that promote circularity and sustainability;
- Workshop 4 – Strategies for Textile Waste Management – Providing methods for managing and reducing textile waste effectively;
- Workshop 5 – Innovations in Digital Solutions and Traceability – Highlighting technological advancements for improving transparency and tracking in the supply chain;
- Workshop 6 – Promoting Sustainable Consumption Practices – Encouraging behaviours and systems that support sustainability;
- Workshop 7 – R&D+I for Sustainable Development – Fostering research, development, and innovation to advance sustainable practices.

Strategies and action plans

7 regional strategies addressing local problems, providing a common vision with mid- to long-term objectives and priorities.

Project Quote

VERDEinMED is more than a project – it is a catalyst for change, uniting Mediterranean regions to transform textile production and waste management. By fostering circular solutions, it paves the way for a greener future that balances innovation, sustainability, and regional growth.

Geographical Scope

The VERDEinMED project is implemented across 7 EU countries/regions, in the MED area:

- Italy – Umbria region
- Spain – Valencia and Andalusia
- North Macedonia
- Bulgaria – Northern Central region
- Greece – Western Macedonia region
- Slovenia
- Portugal – Norte region



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[Click here for the project's website.](#)





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