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Italy-Croatia 2021-2027
Programme

Protection of biodiversity and circular economy in the Adriatic Sea

The Adriatic coastal strip has historically been characterized by a mosaic of socioeconomic, cultural, and ecological conditions, the stability of which is severely threatened by environmental factors of change at various scales, both global and local. These factors impact this context, forcing it to evolve and adapt — not always positively — and requiring different interventions depending on the human dimension involved. When threats lead to potentially radical changes, the impact primarily affects local economic operators, who are highly exposed to these changes and lack the knowledge and adequate tools to address them. We believe it is essential to support them by strengthening research, developing practices for the sustainable management of resources and production, and for the conservation of biodiversity.

Prof. Maurizio Pinna
Project coordinator
Professor of Ecology at the University of Salento

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2 - Green and resilient shared environment
SO 2.2 - Protection of nature and biodiversity



*Shared BLUE knowledge and skills
to sustain BIODIVERSITY and the BLUE ECONOMY
in the Adriatic Sea*

Shaping a blue future for the Adriatic Sea

The BlueDiversity project aims to create replicable models for a blue economy transition, facilitating knowledge transfer and strategic dissemination among various stakeholders to support future innovations in the region. The project aims to enhance ecosystem services (ESs) along the Mediterranean coastlines of Italy and Croatia by promoting sustainable practices that reduce human impacts on biodiversity. It focuses on assessing existing practices, resources, and user attitudes in the Adriatic region, particularly influenced by tourism.

Key objectives include engaging SMEs and establishing “living laboratories” to support small-scale fisheries while fostering collaboration between stakeholders, schools, and local communities. The project emphasises skill enhancement through co-design and hands-on experimentation, ensuring evidence-based results for effective communication and local engagement. Pilot activities will introduce innovative fishing gear to address the invasive blue crab issue, which threatens local ecosystems but also presents commercial opportunities. The project promotes sustainability and circularity in product design, ensuring long-term usability and recyclability.

International Partners involved in the BlueDiversity project



UNIVERSITÀ
DEL SALENTO
Università del Salento



Dept. of Biological and Environmental
Sciences and Technologies



Sea and Karst - Public institution for the management of the protected areas



Eduforma S.r.l.



Institute of Oceanography and Fisheries Split - Laboratory for Chemical
Oceanography and Sedimentology



Public Institution for the Management of Protected Natural Areas of
Dubrovnik-Neretva County



Blu Marine Service Cooperative Company



University of Padua - Department of Biology (DiBio)

THE PROJECT PHASES

State of the Blue Art: research and data collection phase in the coastal regions involved. The goal is to build a **knowledge base** on the state of **marine biodiversity**, **fishing** and **mariculture practices**, and **anthropogenic pressures** in the area.

Blue Initiative: the operational and experimental phase. The goal is to develop **innovative solutions** to **reduce the impact** of human activities on coastal and marine biodiversity.

Blue Education, Training and Culture: a phase dedicated to **human capital** and **awareness-raising** through **workshops** and **training courses**. The goal is to **improve skills** and promote a **shared culture** of coastal and marine sustainability.

Blue Capitalisation: the final phase is dedicated to **sustainability** and the **dissemination of good practices** developed to make them become shared heritage.

PILOT AREAS SELECTED

Through **six pilot areas**, the initiative uses cutting-edge scientific tools such as **environmental DNA analysis** to monitor **native species** and detect **invasive species** early and improve the sustainable development of mariculture: Aquatina di Frigole and Ionian Sea mariculture; Cetina Estuary, Cetina River, Canyon of the Cetina River; Mali Ston bay; Neretva Delta; the coast of San Benedetto del Tronto - natural reserve Sentina; Venice lagoon.

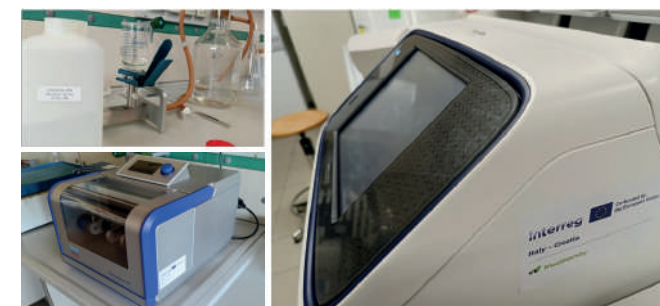


PROJECT MAIN OUTPUTS

The project aims at **creating innovative instruments** and **methods** to **reduce the impact of human activities on biodiversity** in the **small-scale fishing sector**, by reevaluating the role of **local actors** and providing them with concrete **means** and **tools**.

Innovative monitoring and control tools

Central to the project are several **innovative tools** applied to **monitor biodiversity** and manage environmental threats. A common survey based on **Environmental DNA (eDNA)** metabarcoding from water samples collected in all the pilot areas affected by the presence of **blue crab** allows the team to assess the actual biodiversity across the Croatian and Italian Adriatic coastlines.



Custom fishing traps for the **blue crab** were developed and tested to help control this **NIS** while minimizing the bycatch.



A Journey through Science and Collaboration

Science meets the **community** to protect the Adriatic's precious biodiversity through **public events** and **training for students and SMEs**.

