Title: BLUEQ completes four-country field campaign to advance blue carbon science in the Adriatic–Ionian region

Subtitle: Harmonized surveys in Greece, Italy, Albania and Croatia are turning field evidence into practical tools for marine conservation and climate action.

Time and date of publication: Vlorë, Albania | 15 July 2026

T2: Protecting a vital Mediterranean ecosystem

The BLUEQ project—Applied Solutions for Monitoring Coastal Habitats and Quantifying Blue Carbon Storage: An Integrated Approach for Sustainable Ecosystem Management—is co-funded by the European Union under the Interreg IPA ADRION Programme 2021–2027. Led by the University of the Aegean, it brings together partners from Greece, Italy, Albania, Croatia, Bosnia and Herzegovina, and Montenegro to address shared pressures on coastal and marine ecosystems.

BLUEQ focuses on Posidonia oceanica meadows, a priority Mediterranean habitat that supports marine biodiversity, provides nursery and feeding grounds, stabilises sediments, improves water quality and stores carbon over long periods. Yet gaps in comparable information on meadow extent, ecological condition and carbon stocks continue to limit coordinated conservation and climate planning.

The project responds by combining satellite and drone imagery, in-situ and underwater mapping, biodiversity surveys, ecological assessment, sediment coring and biomass sampling. Its objective is to translate this harmonised scientific evidence into an accessible GIS-based solution and a shared regional roadmap for blue carbon conservation.

Figure 1 – Diving, Falasarna Bay

Figure 2 Site visit in Žut–Sit archipelago

T3: Results so far: one methodology, four study areas

Between October 2025 and July 2026, the BLUEQ partnership implemented coordinated field campaigns in four representative protected or high-value marine areas. Applying common protocols across contrasting ecological settings has created comparable information and strengthened cooperation among researchers, protected-area managers, public bodies and technical experts.

Crete, Greece — October 2025. At Falasarna Bay, within the Natura 2000 network, teams carried out in-situ habitat mapping, drone surveys, coastal observations, biodiversity transects, sediment coring and biomass sampling. Initial analysis found 10–13 species per Posidonia transect, compared with five on bare sediment. The meadow was classified as being in Good Ecological Status under the Posidonia Rapid Easy Index (PREI).

Sicily, Italy — 16–22 November 2025. At the Plemmirio Marine Protected Area, underwater and drone mapping were combined with biodiversity and ecological assessments, coring, and sample preparation for laboratory analysis. Posidonia transects supported 14–16 species, compared with six on bare sediment, while the assessed meadow was classified as being in Good Ecological Status.

Vlorë, Albania — 28–30 April 2026. Fieldwork based at the Radhimë Visitor Centre covered Radhimë, the Karaburun Peninsula and waters around Sazan Island. Diving teams measured water parameters, recorded marine habitats and collected traceable biological, biomass and sediment samples. Surveys documented a locally dense, structurally developed Posidonia patch and evidence of natural regeneration; broader measurements are still required before drawing conclusions for the meadow as a whole.

Žut–Sit archipelago, Murter Island and Šibenik, Croatia — 7–9 July 2026. Hosted by the Public Institution Nature of Šibenik-Knin County, the final visit combined field observations and sample collection around Žut Island with peer learning on monitoring methods and conservation practice. The campaign completed the four-site field sequence and extended the common dataset into the northern Adriatic.

Early Findings

The first analysed results confirm the habitat value of Posidonia meadows: at both Falasarna and Plemmirio, species richness and diversity were consistently higher in vegetated transects than on adjacent bare sediment. Across all sites, samples were collected, labelled, preserved and documented through standard procedures so that field observations can be converted into reliable, comparable laboratory results. Results for the later campaigns remain under analysis.

Launch Transnational Observatory

The fieldwork has also reinforced the BLUEQ transnational Observatory. The Observatory is designed as a lasting cooperation framework for data sharing, knowledge transfer, harmonised monitoring and regular updates on the state and conservation of seagrass ecosystems. It connects institutions and experts from participating countries and supports the co-development and future uptake of the BLUEQ Joint Strategy.

T4: Next steps: from samples to solutions

Following completion of the field campaigns, partners will finalise laboratory and spatial analyses of sediment, biomass, biodiversity and habitat-mapping data. The work will quantify carbon stocks and examine ecological indicators and the origin, stability and potential vulnerability of stored organic carbon.

These results will feed the BLUEQ Joint Solution: an interactive GIS-based platform integrating three connected tools. The Monitoring Tool will visualise meadow extent and condition using three levels of information; the Blue Carbon Tool will convert mapped seagrass extent and field measurements into spatial estimates of carbon stocks; and the Decision Support Tool will help users explore greenhouse-gas benefits and co-benefits under different management and nature-based restoration scenarios.

The solution will be tested with end users, including public authorities, marine protected-area managers, researchers and members of the BLUEQ Observatory. Evidence from the four study areas will also inform the BLUEQ Joint Strategy, a shared roadmap for incorporating blue carbon into marine spatial planning, conservation, restoration and climate policy across the Adriatic–Ionian region.

By linking science, practical tools and long-term transnational cooperation, BLUEQ is helping decision-makers move from fragmented information towards coordinated, evidence-based protection of one of the Mediterranean's most valuable coastal ecosystems.

T5: About BLUEQ

BLUEQ (IPA-ADRION00447) stands for "Applied Solutions for Monitoring Coastal Habitats and Quantifying Blue Carbon Storage: An Integrated Approach for Sustainable Ecosystem Management". The project is co-funded by the European Union under the Interreg IPA ADRION Programme 2021–2027 and supports a greener, more climate-resilient Adriatic–Ionian region.

T6: Further information

- Project website: https://blueq.interreg-ipa-adrion.eu/
- Facebook page
- Linkedin