2026	LIFE SeaTrace — A Digital Circular Ecosystem for Marine Litter Recovery, Traceability and Valorisation						
Country	**Contract value (€)**	**% by Epsilon**	**Staff # provided**	**Client**	**Origin of funding**	**Date (start/end)**	**Consortium Members**
IT, HR, EL	3,735,413	7.7% (€288,913)	3	EU / CINEA	EU LIFE Programme	2027–2031 (tbc)	Innovation Sea (IT, coord.) + 14 partners from IT, ES, MT, EL, HR

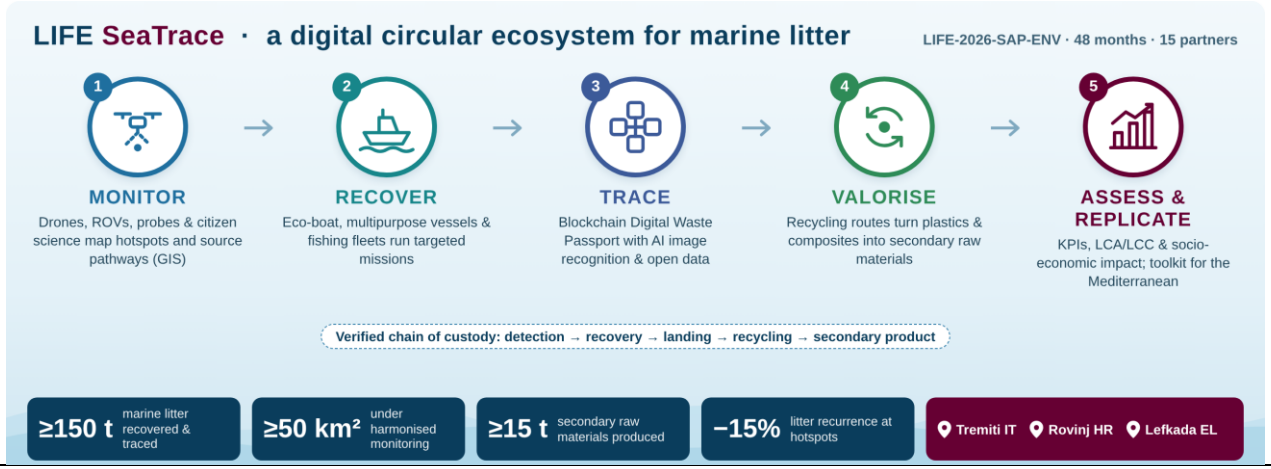
The Project (2026)

The Adriatic and Ionian Seas are semi-enclosed basins where marine litter, microplastics and liquid pollutants accumulate on surfaces, coastlines and seabeds, damaging Posidonia meadows, contaminating seafood and harming fisheries and tourism. Litter recovered at sea is rarely measured, traced or recycled in a verifiable way, and monitoring data remain fragmented.

LIFE SeaTrace will demonstrate an integrated, evidence-driven and digitally verified model connecting monitoring, targeted recovery, traceability and circular valorisation of marine litter. Building on the SEA Trace platform already operating in the port of Termoli, the model will be demonstrated in three pilot areas with different environmental and institutional conditions: the Tremiti Islands Marine Protected Area (Italy), the port and archipelago of Rovinj in Istria (Croatia) and the island of Lefkada (Greece).

The project will (1) map contamination hotspots and source pathways with thermal drones, ROVs, multiparameter probes and citizen science; (2) remove litter through planned and rapid-response missions with a mobile eco-boat, multipurpose vessels and local fishing fleets; (3) extend SEA Trace into a blockchain-based Digital Waste Passport certifying the full litter lifecycle, supported by AI image recognition and interoperability with public registers; (4) test recycling routes for recovered plastics and composites; and (5) engage fishers, schools, communities and authorities and prepare replication across the Mediterranean.

Targets include at least 150 tonnes of litter recovered and traced, 50 km² under harmonised monitoring, 15 tonnes of secondary raw materials and a 15% reduction in litter recurrence at intervention hotspots.



Services to be provided by EPSILON

EPSILON participates as a beneficiary in the 15-partner consortium and leads two work packages, providing the geospatial evidence and impact assessment on which the SeaTrace model is planned, verified and replicated.

WP2 – Evidence base (M1–M42): EPSILON leads the baseline characterisation of the three pilot areas (litter densities, hotspots, existing data and institutional context) and develops, with UNIMOL and HELMEPA, a harmonised MSFD-consistent classification and monitoring protocol applied identically at all sites. It integrates survey, remote-sensing, bathymetry, current, wind, land-use and infrastructure layers in GIS to identify recurrent accumulation patterns and source pathways and to rank priority intervention areas.

WP6 – Impact monitoring and assessment (M1–M48): EPSILON designs the indicator framework and KPI monitoring, performs the Life Cycle Assessment (LCA) and Life Cycle Costing (LCC) of the complete SeaTrace chain and its recycling routes against the current management scenario, and leads the socio-economic assessment of effects on coastal communities, fisheries and employment, supporting consistent LIFE KPI reporting.

Digital and replication support: EPSILON contributes to the open interoperable data schema and marine environmental data lake (WP3), integrates assessment results into the project GIS and decision-support environment, and supports the open specification, public registry and replication toolkit for transfer to other Mediterranean and European coastal regions (WP8).

Key expertise: GIS and remote sensing, geospatial databases, LCA/LCC, decision-support systems and EU project management, building on BLUEISLES, EcoShipYard and VesselsLIFE.