

	Engagement		LOBSTER: Large-scale Observation of Biodiversity and Simulation of Trends in Ecological Resilience					
	Countries	Project value (€)	% by EPSILON	€ by EPSILON	Engagement	Funding by	Date	Partners
	GR, IL, TR, IT, AM, UA, BG, AT, RO, PT, ES, FR, CY, MT, TN, GB, MA, MD, GE	12.987.150	2,4%	310.500	HORIZON	EU	15.02.2022	DUTH, Technion, IU, UNIBO, AUTH, AUA, ONU, UH, TUV, GUT, SU, DDNI, INESC, CIIMAR, PLOCAN, CAMERI, CNRS, ARI, UPAT, DHMO, Epsilon, Alpha, MIG, Metri, TS, SG, Hidromod, BLIT, ALS, SEABOT, EcoOcean, AGIR, Eco-Tiras, BSNN, CENN, SPNI, SPA/RAC, Agora
Description					Outcome			
Since the latter half of the 20th century, monitoring changes in biological communities has been improved as more scientific rigour and international networks were incorporated into observation. Despite the progress made in the monitoring of Essential Biodiversity Variables (EBVs) and the establishment and operation of various observation networks, such as GEO BON, MBON, GBIF and others, guiding the process of harmonized data collection, the fraction of information currently available and accessible on biodiversity remains inadequate. These gaps in knowledge prevent policy-makers from addressing the emerging challenges related to human development, climate change and planetary management. LOBSTER aimed to develop and deliver a functional framework that blends existing and new monitoring systems to provide evidencebased, low-cost, and user-friendly systems, to map, observe, and monitor terrestrial, coastal and marine biodiversity. The framework would be integrated into existing networks of observation and forecasting across the Mediterranean Sea (MSB), Black Sea (BSB) and Red Sea (RSB) basins, and will be seamlessly replicable to other EU sea basins. LOBSTER was based on four main actions: • Data collection, validation, fusing, and analysis • Spatial prioritization for conservation • Adjustment of spatial prioritization according to ecosystem dynamics • Consolidation of science-based master plans for biodiversity conservation with broad acceptance in civil society					To achieve the project objectives, EPSILON and the Consortium proposed to: • Produce a novel and unique, cost-effective, user-friendly system easily replicable to other EU Seas. • Build on previous knowledge, experience and data provided by CMEMS, EMODnet, GOOS, ESA, and other networks, to develop and operate the innovative LOBSTER Platform • Establish a sustainable network of Observatories based on existing and newly established LOBSTER infrastructures with remote and in-situ, mobile and fixed sensors, collecting local biodiversity data, along with other relevant environmental parameters, feeding those data into LOBSTER platform • Populate the LOBSTER platform with additional data on current and projected human activities and map these into the biodiversity observations to assess changes in the short-, medium-, and long-term. • Advance and improve the reliability of existing remote sensing techniques and methodologies to monitor biodiversity in terrestrial, coastal and marine environments. • Develop novel, cost-effective underwater sensors and samplers installed on gliders			

