



TECHNOLOGY PLATFORMS

SUBCATEGORY	INSTITUTE	SERVICE DESCRIPTION	CONTEXTUAL INFORMATION
Bioassays	CNR-ISMAR	Access to ecotoxicology, chemistry labs (for genotoxicity, biochemical, cellular, histochemical and physiological biomarkers, histological and metal /organics for bioaccumulation analyses)	
Bioassays	CNR-ISP-ME	Access to facility for microbial enzymatic activities testing (leucin aminopeptidase, beta-glucosidase and alkaline phosphatase); Respiratory (ETS) activity, Carbon substrates utilization profiles (Biolog Ecoplates)	Two decades experience in enzymatic activity and respiratory rates involved in organic matter turnover in different matrices (water, sediments, marine, brackish and freshwater environments); physiological response (digestive and immune functions) of marine Teleosts to natural and anthropic stressors
Bioassays	CONISMA-UNICAM	Access to toxicogenomics platform on fish cellular models (including E-Screen, YES and YAS assay, biosensors platform "On-surface" binding studies using a biosensor-based approach for detecting environmental contaminants in real matrices)	Vitellogenin assay on ELISA; E-Screen assay, YES/YAS assay; biosensors platform "On-surface", bioanalytical methods to detect environmental contaminants in real matrices, binding studies using a biosensor-based approach for measuring environmental contaminants effects on biological targets.
Bioassays	ENEA-NA	Access to ecotoxicology platform for bioassay with marine microalgae, marine crustacea (chronic and acute), echinoderms (semichronic and acute) and bioluminescent bacteria on water and sediment matrices	Ecotoxicological bioassays can be performed on algae, bacteria, crustacea, echinoderms, mussels.
Bioassays	SZN	Access to the screening platform for the bioactive compounds isolation (antimicrobials, anticancers, antibiofilms)	Contextual isolation and cultivation of algal strains for screening and basic molecular biology equipment are available on request





Bioassays	UNIME	Access to PHARMALAB and ZEBRALAB screening platforms. PHARMALAB: screening of immunomodulatory, neuroprotective, analgesic, anti-fungal, anti-inflammatory, anticancer, antimicrobial, and antimalarial properties of newfound molecules on cell lines (in vitro) or aquatic animals (in vivo). ZEBRALAB: screening platform for zebrafish embryo toxicity test assays	PHARMALAB: aquatic organisms are screened for immunomodulator, neuroprotective, analgesic, anti-fungal, anti-inflammatory, anticancer, antimicrobial, and antimalarial properties. ZEBRALAB: research facility equipped with aquaria and tanks for aquatic animals experiments and production. Zebrafish production for research and In vivo studies on aquatic models.
Bioassays	UNIVPM-DISVA	Access to Ecotoxicological Assays platform, including analyses of the main cellular biomarkers (i.e. biotransformation, detoxification, oxyradical metabolism and oxidative stress, peroxisomal proliferation, impairment and toxicity to cellular membranes, lysosomes, other organelles and DNA) and ecotoxicological bioassays (bacterial bioluminescence, algal growth, embryotoxicity, mortality)	Effects underlying metabolization, detoxification and toxicity of chemical pollutants can be analysed at the molecular, biochemical, cellular and organism levels
Imaging	SZN	The Advanced Microscopy Centre (AMC) provides the necessary skills to the application of optical microscopy and conventional fluorescence techniques (epifluorescence or confocal).	Assistance and sample preparation for optical, electron microscopy, live cell imaging, confocal microscopy, 3D and 4D microscopy, TEM and SEM. Ad hoc protocol development and data analyses and interpretation is available on request
Imaging	UNICA	Environmental Scanning Electron Microscopy (ESEM)	Electron microscopies are used for material imaging, elemental composition analysis and for material characterization, down to the nanometres scale.
Imaging	UNIME	Access to LabsTREAM - TAXOMAR facility for teleost otolith analysis facility with Zeiss EVO-10 EM, including external texture organization analysis	Fish otolith examination and analysis for ecological and zoological research: morphometry, shape analysis, external texture organization, fish age determination, fish stock assessment. SEM and micro-FT-IR are used for fish otolith analyses.
Molecular biology and omics	CNR-ISP-ME	Cultivation and genomic analysis of microorganisms isolated from extreme environments	Polar Bacterial strain cultivation and identification; screening for biotechnological potentialities; bioinformatics
Molecular biology and omics	IZSPLV	Molecular Biology Core Facility	End-point PCR, Real-time PCR, Sanger/Next Generation Sequencing(NGS-WGS), Microsatellite analysis are available. . Ad hoc protocol development and data analyses and interpretation is available on request.



Molecular biology and omics	SZN	The Molecular Sequencing & Analysis Center (SMAC) offers services, training and consulting in the field of Molecular Biology, from the execution of complex procedures to specific consultancy and development services and on-demand protocols.	The Unit has developed a sequencing service which includes both the classic Sanger method that the Ion deep sequencing technology GeneStudio S5, a service for the Real Time PCR and a service for the droplet digital PCR that will be improved by the purchase of the sonicator "Covaris" for Chromatin immunoprecipitation experiments". The unit is also equipped with aCSAM2 automated liquid handler for low to mid throughput processes the unit also integrates the cytometry service with the setting up of a new laboratory equipped with BD equipment, the sorter "Influx" and 37 the "FACS Verse" cytometer extending the portfolio of offered technologies to users. Ad hoc protocol development and data analyses and interpretation is available on request.
Molecular biology and omics	UNIME	Access to LabsTREAM - GAO facility for genomic identification of aquatic organisms	Genomic identification of aquatic organisms (Teleosts and Elasmobranchs) and gene based analyses (DNA extraction, sequencing and bioinformatic, Gene expression studies). Environmental DNA analyses
Molecular Biology and Omics	UNITO	Access to fungal molecular biology lab for metabarcoding, metagenomic and WGS of marine taxa	
Molecular biology and omics	UNITUS	Lab of molecular ecology, molecular parasitology and e-DNA	Dissection laboratory for sampling tissues and parasites fully equipped including stereomicroscopes. Molecular ecology lab fully furnished for DNA extraction and PCR amplification from metazoans and microorganisms. Genomic libraries. e-DNA sampling from seawater; e-DNA characterization
Molecular biology and omics	UNIVPM-DISVA	Access to the Molecular Biology Core Facility for the production of recombinant proteins from marine organisms, including protein structure resolution and modelling.	Molecular Biology Core Facility (https://www.disva.univpm.it/content/masbic). Applications include the purification of proteins and membrane proteins from marine organisms; studies of enzyme functions and integration of molecular, biochemical, cellular and organismal approaches; crystallization and structure determination; transcriptome and gene expression analyses
Remote sensing and telemetry	CNR-IAS-CG	Recording and analysis of underwater sounds and acoustic surveys for biomass assessment of small-sized pelagic fish	Recording of underwater sounds (from organisms and environment) in tanks and at sea. Ethernet- and RS232-devices for parameters collection and device testing is available. Experimental acoustic surveys for biomass assessment of small-sized



			pelagic fish from hired vessel can be performed. Custom-built, non-commercial software can be developed for the analysis of acoustic data sets.
Remote sensing and telemetry	CNR-IRBIM-L	Access to inshore stations of intertidal areas of the Lesina lagoon	Inshore meteorological station (ISMAR laboratories), 20 m away from southwestern shore of the Lesina lagoon, is available for data retrieving. Data: wind speed and direction, air temperature, atmospheric pressure, humidity, precipitation. Real time data transmission Hydro station, 10 m from the shore, bottom depth 05-07 m. data: water temperature and level. Real time data transmission.
Remote sensing and telemetry	CNR-ISMAR	Access to Aqua Alta offshore oceanographic tower equipped with meteorological and hydrographic sensors, wet lab, underwater videocameras and available to install sensors/automatic samplers	Aqua Alta is a unique offshore tower equipped with autonomous meteorological-oceanographic instrumentation, sensors for hydrology, ADCP, hydrophones and 2 fixed underwater video cameras (continuous recording), wide band intranet connection, two rooms (small lab and accommodation)
Remote sensing and telemetry	CNR-ISP-BO	Access to Oceanographic parameters of marine observatory in Kongsfjorden, Svalbard Island	The infrastructure is available for specific experiments, sensor testing and in situ validation, or to collect additional data to those already acquired by the operator. The access includes the use of the facilities of the "Arctic Station Dirigibile Italia", including its laboratories. The station is equipped with everything needed for pre-conditioning the collected samples. Boats are available for rent locally.
Remote sensing and telemetry	CNR-ISP-ME	Polar acoustic measurements for maritime traffic and marine megafauna assessment	Polar Acoustic data analysis; Estimation of underwater noise and environmental acoustic components; Evaluation of ecological dynamics through the analysis of the acoustic vocalizations of marine mammals; Analysis of the biochemical, physiological and behavioural responses of animals exposed to acoustic disturbance.
Remote sensing and telemetry	CONISMA-POLIBA	Access to the POLIBA Laboratory of Coastal Engineering (LIC) equipped with multiple 90x50x1,20 meters tanks and sensors equipped for physical modeling of coastal and offshore phenomena	Available equipment include: multiple tanks and channels where to set-up the experiment, a jet thermal-hydraulic system, an apparatus for the measurement of sediment fall velocity and for analysis of sediment division, sediment concentration probes, 3D and 2D wave makers, resistive probes for waves detection, ultrasound level sensors, Acoustic Doppler Velocimeters, Stream-flow rotor velocity meter, pressure transducers,



			<p>Vessel Mounted - Acoustic Doppler Profiler, vessel mounted - acoustic doppler profiler, GPS stations, Laser Doppler Anemometers, drones and laser scanners. Further informations can be found in the dedicated datasheet: https://docs.google.com/spreadsheets/d/1b7T0JhyAQDEpk09wunLjKHO3SLFM009y/edit?usp=share_link&oid=116656549857348920315&rtfpof=true&sd=true</p>
Remote sensing and telemetry	CONISMA-UNICAM	<p>Access to remote sensing equipment (including: multiparametric probe; mantra trap for microplastic collection; GIS and telemetry. Environmental data acquisition systems; sediment analysis ; bathymetric surveys and side scan sonar)</p>	<p>The service is based on the use of geographic information systems (ArcMap or QGIS) and in this perspective, various spatial and spatio-temporal analysis can be performed. Carrying out surveys (also georeferenced) of fauna and flora of coastal areas. Mantra trap, multiparametric analysis available.</p>
Remote sensing and telemetry	ENEA-LS	<p>High-resolution monitoring stations (4) located in mullsk farming in the Gulf of La Spezia. In-situ high resolution multiproxy probes acquiring physio-chemical data (i.e., temperature, pH, pCO₂, oxygen) and data validation via analytical facilities (carbonate environment, oxygen and chlorophyll)</p>	
Remote sensing and telemetry	SZN	<p>The Core facility for Environmental Monitoring & Analysis (MAA) offers support for sampling and laboratory activities aimed at determining the main environmental variables</p>	<p>Continuous acquisition, processing and analysis of the main hydrographic variables (temperature, salinity, dissolved oxygen, fluorescence, transmittance, PAR, SPAR and pH) along the water column. Measurements of surface current and along the water column; contingent collection and selection on request of target marine organisms. Ad hoc protocol development and data analyses and interpretation is available on request.</p>
Remote sensing and telemetry	UNITO	<p>Access to acoustic sensors and Autonomous Recording Units (ARUs) for the Passive Acoustic Monitoring (PAM) of the marine wildlife</p>	<p>Shallow waters (up to -300m) and deep waters (up to -1000m) Autonomous Recording Units (ARUs) for the collection of marine soundscape recordings and Passive Acoustic Monitoring of marine wildlife. ARUs are equipped with release transponders, hi-capacity SD cards and lithium batteries for long-lasting deployments. UniTO will provide support and training in identifying the areas suitable for deploying the sensors, the mooring of the devices and the analysis of the acoustic data. Additionally, remote access and</p>



			analysis of extensive marine soundscape recordings is available.
Remote sensing and telemetry	UNITUS	Oceanography Laboratory	High coastal resolution models, oceanographic modelling, remote sensing data analysis, GIS Biocoenosis and Ecosystem Services Maps
Structural and chemical analysis	CNR-IRBIM-L	Environmental analysis of nutrients, chlorophyll a, Dissolved Organic Carbon and its chromophoric fraction	Chemical lab equipped with Autoanalyzer 3 - Bran + Luebbe (Norderstedt, Germany) and Trilogy laboratory Fluorometer (Turner Designs, V. 1.2); SHIMADZUTOC-L CHS series + SSM 5000 and to SHIMADZU 2600 series dual beam UV-VIS spectrophotometer
Structural and chemical analysis	CNR-ISP-BO	Analyses on organic tissues and sediments: CHN Elemental composition, delta13C, delta 15N, organic matter tracers	Access to organic chemistry lab for analyses on organic tissues and sediments: CHN Elemental composition, delta13C, delta 15N, organic matter tracers
Structural and chemical analysis	CNR-ISP-RM	Access to structural and chemical analysis labs of ISP-ROMA, including: CLPP microbiology lab for evaluation of the structure and metabolic properties of natural microbial communities in relation to contamination data; MICROCHEM facility for the determination of legacy and emerging organic contaminants in environmental matrices and the assessment of environmental risk associated with contamination data measured in situ at polar areas and mid- latitudes	Assessment of microbial profiling through a taxonomic fingerprint of the main microbial groups (Grampositive, Gram-negative bacteria and Fungi) by biochemical methods (PhosphoLipid Fatty Acid analysis-PLFA) and assessment of the spatial and temporal changes in the metabolism of microbial communities by the spectrophotometric method community-level physiological profiling (CLPP)
Structural and chemical analysis	CNR-ISP-VE	Access to lab for environmental analytical chemistry and micro/nano plastics characterisation	Access to a full equipped lab for inorganic, organic chemistry analyses and microplastics research lab, including mass spectrometry (high and low resolution), optical emission spectroscopy, Isotope Ratio analyses, atomic fluorescence. organic chemistry analyses: HPLC-Orbitrap (metabolomic analysis, untargeted contaminants analysis), HPLC-MS/MS (PFAS, Bisphenol A, pharmaceuticals, neonicotinoid compounds),GC-MS/MS (IPA, PCB, personal care products, flame retardants), etc.. To characterize microplastics it's available a research lab equipped with Micro-FTIR Infrared Microscope and Py-GC/MS for polimeric characterisation.
Structural and chemical analysis	CONISMA-UNISALENTO	Metabolic studies & Metabolomic lab	Bruker Avance III 400 MHz NMR spectrometer, Milestone Start D Microwave Mineralizer, Perkin Elmer



			Lambda 16 UV-Vis spectrophotometer, Thermo Scientific iCAP 6300 Duo ICP-AES spectrometer, Bruker Fourier 80 NMR Spectrometer - Metabolic Profiler composed of: AVANCE III HDTM 600 Superconducting FT-NMR Spectrometer, BRUKER Daltonics MicroTOF Q ESI Q TOF Mass Spectrometer, LC-SPE, NMR accessory, Metabolic Profiling Software. Dedicated hardware and software for metabolomics studies
Structural and Chemical Analysis	ENEA-LS	Access to radioecology and geochronology technological platform, including gamma spectrometry for sediment core dating and for reconstruction of recent changes in micro and macro benthic organisms in sediment samples	
Structural and Chemical Analysis	ENEA-NA	Access to sedimentology facilities and support for and benchtop instrumentation for granulometric analyses	
Structural and chemical analysis	ISPRA	Access to Environmental Analytical Chemistry Labs (inorganic and organic chemistry, water, sediment and biota chemical-physical analysis and microplastic extraction, isolation and identification from biotic matrices; equipment include: mass spectrometry (high and low resolution), optical emission spectroscopy, Isotope Ratio analyses, atomic fluorescence, HPLC-Orbitrap (metabolomic analysis, untargeted contaminants analysis), HPLC-MS/MS)	Available equipment include: mass spectrometry (high and low resolution), optical emission spectroscopy, Isotope Ratio analyses, atomic fluorescence, HPLC-Orbitrap (metabolomic analysis, untargeted contaminants analysis), HPLC-MS/MS); water chemical-physical analysis include analysis of nutrients, chlorophyll a, Dissolved Organic Carbon and its chromophoric fraction; for analysis of microplastics MicroFT-IT (Lumos II) are used for microparticle analyses and accurate identification of polymers in ATR, transmission and reflection spectroscopy.
Structural and chemical analysis	IZSPLV	Spectrometry Core Facility. Marine passive sample deployment for environmental pollution monitoring	Maldi Biotyper (advanced tech. mass spectrometer) and IR Biotyper (advanced tech. infrared spectrometer) are available. Ad hoc protocol development and data analyses and interpretation is available on request. Marine pollutant, drug metabolites
Structural and chemical analysis	SZN	Access to mass spectrometry facility for early-stage molecule dereplication	
Structural and chemical analysis	UNIME	Access to UNIME Structural analysis facilities: LabsTREAM - LAM facility for the extraction (water, sediment and biological matrices) and analysis of microplastics; MeIT - METALS facility for determination of the amino acid profile and biogenic	Microplastic extraction, isolation and identification from biotic matrices is performed. SEM and microFT-IT (Lumos II) are used for microparticle analyses and accurate identification of polymers in ATR, transmission and reflection spectroscopy. Lipid profile are studied through GC-FID/MS, LC-



		amines, essential and toxic metals (heavy metals) by ICP-MS and other chromatographic techniques; Access to MeIT - LIPIDS facility for the investigation of the lipid profile of extracts of marine species	MS methods and direct-MS approaches. The lipid profile will represent a fingerprint of each species, useful against fraudulent activities (mislabeling, etc.) and could be correlated with pathophysiological conditions (food security and food safety implications).
Structural and Chemical Analysis	UNITO	Access to facility for fungal fermentation and profiling of their bioactive compounds	At MUT fungal fermentation in both submerged or solid state conditions can be performed for the further chemical characterization of the bioactive molecules produced by marine fungi.
Structural and chemical analysis	UNIVPM-DISVA	Access to Mass Spectrometry facility including: Liquid Chromatography-MS, Gas Chromatography-MS, ICP-MS, Atomic Absorption Spectrophotometry, HPLC with fluorescence and diode array detectors.	Environmental chemistry service allowing to determine all the classes of chemical pollutants including traditional (metals, PAHs, halogenated hydrocarbons) and emerging pollutants (i.e. pharmaceuticals, microplastics, flame retardants)



EMBRC-IT Operators & Local Access Officers

Stazione Zoologica Anton Dohrn

SZN

Napoli

Villa Comunale, 80121, Napoli

Webpage: <https://www.szn.it/index.php/it/>

Local Access Officer: Giorgio Maria Vingiani; giorgio.vingiani@szn.it

Consiglio Nazionale delle Ricerche - Istituto di Scienze Marine

CNR-ISMAR

Venezia

Arsenale - Tesa 104, Castello 2737/F, 30122, Venezia

Webpage: http://www.ismar.cnr.it/index_html-1?set_language=en&cl=en

Local Access Officer: Lucia Bongiorno; lucia.bongiorno@ve.ismar.cnr.it

Consiglio Nazionale delle Ricerche - Istituto per lo studio degli impatti Antropici e Sostenibilità in ambiente marino

CNR-IAS

Oristano, Capo Granitola

Oristano Institute: Località Sa Mardini, 09072, Torregrande

Capo Granitola Institute: Via del Mare n. 3 - 91021 Torretta Granitola

Webpage: <http://www.ricercamarina.cnr.it/en/ias.php>

Local Access Officers: Stefano Marras (Oristano), Giorgio Tranchida (Capo Granitola);
stefano.marras@cnr.it, giorgio.tranchida@cnr.it



Consiglio Nazionale delle Ricerche - Istituto per le Risorse Biologiche e le Biotecnologie Marine

CNR-IRBIM

Messina, Lesina

Messina Institute: Spianata San Raineri n. 86, 98122 Messina
Lesina Institute: Via Pola 4, 71010 Lesina

Webpage: <https://www.irbim.cnr.it/en/>

Local Access Officers: Anna Perdichizzi (Messina), Antonietta Specchiulli (Lesina);
anna.perdichizzi@cnr.it, antonietta.specchiulli@cnr.it

Università di Camerino (Consorzio Nazionale Interuniversitario per le Scienze del Mare)

CONISMA - UNICAM

San Benedetto del Tronto

V.le Alfredo Scipioni n.6, 63074, San Benedetto del Tronto

Webpage: <http://urdis.unicam.it/URDIS.html#>

Local Access Officer: Paolo Cocci; paolo.cocci@unicam.it

Politecnico di Bari (Consorzio Nazionale Interuniversitario per le Scienze del Mare)

CONISMA - POLIBA

Bari

Area Universitaria di Valenzano S.P. Valenzano Casamassima, Km.3, 70010, Valenzano



Webpage: <http://www.en.poliba.it/research/coastal-engineering-laboratory-lic>

Local Access Officer: Michele Mossa; m.mossa@poliba.it

Università del Salento (Consorzio Nazionale Interuniversitario per le Scienze del Mare)

CONISMA - UNISALENTO

Lecce

Piazza Tancredi n. 7, 73100, Lecce

Webpage: <https://www.unisalento.it/en/web/international/>

Local Access Officer: Stefano Piraino; stefano.piraino@unisalento.it

Agenzia Nazionale per le nuove tecnologie, l'energia e lo sviluppo economico sostenibile

ENEA

La Spezia, Portici

La Spezia Institute: Località Pozzuolo, Via Santa Teresa, 19032, Lerici

Portici Institute: Research Center Arcades, P.le Enrico Fermi n. 1, 80055, Portici

Webpage: <https://www.enea.it/en>

Local Access Officer: Chiara Lombardi; chiara.lombardi@enea.it

Istituto Superiore per la Protezione e la Ricerca Ambientale

ISPRA

Roma

Via Vitaliano Brancati n. 48, 00144, Roma

Webpage: <https://www.isprambiente.gov.it/en>



Local Access Officer: Chiara Maggi; chiara.maggi@isprambiente.it

Università degli Studi della Tuscia

UNITUS

Viterbo

Via S.M. in Gradi n.4, 01100 Viterbo

Webpage: <https://unitusorienta.unitus.it/en/homepage/>

Local Access Officer: Roberta Cimmaruta; cimmaruta@unitus.it

Università degli Studi di Cagliari

UNICA

Cagliari

Via Università n.40, 09124, Cagliari

Webpage: <https://www.unica.it/unica/en/ricerca.page>

Local Access Officers: Pierantonio Addis, Maria Cristina Follesa;
addisp@unica.it, follesac@unica.it

Università degli Studi di Messina

UNIME

Messina

Piazza Pugliatti n. 1, 98122, Messina

Webpage: <https://international.unime.it/>

Local Access Officer: Serena Savoca; serena.savoca@unime.it

Università degli Studi di Torino

UNITO



Torino

Via Verdin. 8, 10124 Torino

Webpage: <https://www.szn.it/index.php/it/>

Local Access Officer: Livio Favaro, Anna Poli; livio.favaro@unito.it,
anna.poli@unito.it

Università Politecnica delle Marche

UNIVPM

Ancona

Piazza Roma n. 22, 60121, Ancona

Webpage:

https://www.univpm.it/Entra/Universita_Politecnica_delle_Marche_Home/L/1

Local Access Officer: Cristina Gambi; c.gambi@univpm.it