

INFRASTRUCTURE/FACILITY	RIMAR - Access to marine ecosystems and environmental analysis
INFRASTRUCTURE/FACILITY	Access to marine ecosystems and environmental analysis
LOCATION OF INFRASTRUCTURE/FACILITY	Stazione Zoologica Anton Dohrn / Sede di Portici Via Nuovo macello 16 80055 Portici (NA)
LEGAL NAME OF OWNER ORGANIZATION	Stazione Zoologica Anton Dohrn
COUNTRY	Italy
CONTACT	Phd Simonepietro Canese Stazione Zoologica Anton Dohrn Via Gregorio Allegri 1 - 00198 – Rome Italy Cell: + 39 3356790469 Email: simonepietro.canese@szn.it Skype: simonepietro.canese

DESCRIPTION

The section "Access to marine ecosystems and environmental analysis" consists of the Units IRM, IMOM, MAA and ITR, in a multidisciplinary context created by the interaction between the different units. Thanks to the contribution of the research and infrastructure projects PON PRIMA, PON InSEA, PON PLaCE, and others forthcoming, the Section will be equipped with high technological value instrumentation and multidisciplinary fixed observatories both coastal and deep that are fully part of the European and international context for ecosystem monitoring services, for the preservation of the state of environmental quality, needed for preserving and regenerate natural capital (see e.g.

EMSOERIC, EMBRC-ERIC, CLUSTER-BIG). This is in consideration of the fact that marine resources will be in the near future the object of greater use by human activities. The expansion of marine research must interact strongly with the many economic activities that take place at sea and eco-sustainable exploitation of its natural resources. In this scenario the role of the Stazione Zoologica and in particular of the Section for Access to Marine Ecosystems and Environmental Analysis of the RIMAR Department, is preeminent and it will therefore be necessary to focus on technological development thanks to the strong interaction of the connection between Core facilities and Infrastructure for research at sea (IRM), Implementation, Technology & Robotics (ITR) and Environmental Monitoring and Analysis (MAA).

RI/ Facility participating in an ERIC

YES

ERIC EMBRC www.embrc.eu,
www.embrc.it

ANALYTICS/EXPERIMENTAL INFRASTRUCTURES/FACILITIES

TYPE	SERVICE DESCRIPTION	ADDITIONAL INFORMATION
<i>Research vessel</i>	<p>VESSEL TYPE: SCIENTIFIC RESEARCH SHIP</p> <p>GROSS TONNAGE (GT): 284</p> <p>LENGTH OVERALL (LOA): 35.0 m</p> <p>BEAM: 7.8 m</p> <p>DRAFT: 2.5 m</p> <p><i>The ship is 35 meters long and can accommodate 12 researchers and 10 crew members. It is equipped with the most advanced technological instruments to expand exploration, mapping, and scientific research capabilities from coastal areas to the edge of the continental slope.</i></p> <p><i>The vessel features a state-of-the-art gyroscopic stabilizer, allowing stable operations even in rough sea conditions. It also includes a "moon pool," a small internal pool that enables the deployment of sophisticated instruments into the sea.</i></p> <p><i>The interior layout is designed to</i></p>	

	<p>optimize research activities, featuring:</p> <p><i>A wet laboratory on the deck, located near the area where samples arrive, for handling water samples. A dry laboratory for conducting delicate analyses on collected samples.</i></p> <p><i>A large oceanographic laboratory dedicated to controlling electronic instruments, including sonar and remotely operated vehicles (ROVs).</i></p> <p><i>In addition to research facilities, the vessel is equipped with an efficient kitchen, a comfortable dining area, and cozy cabins for researchers and crew who will spend extended periods at sea. Its dimensions, advanced low-impact propulsion system, and hybrid powertrain (including an electric motor for movements up to 6 knots) enable the ship to be operated with a reduced crew and consume minimal fuel, significantly lowering operational and maintenance costs. With a 10-day autonomy, the ship can reach any part of the Mediterranean.</i></p> <p><i>The vessel can travel at a maximum speed of 15 knots, but it is also capable of ultra-low speeds—less than 1 km/h—when towing sophisticated instruments for biological and environmental research.</i></p> <p><i>The Dohrn is equipped with a cutting-edge dynamic positioning system (Kongsberg Aquapos), allowing it to maintain a fixed position in the open sea and perform complex maneuvers with centimeter-level precision—an essential feature for deploying instruments on the seabed with extreme accuracy.</i></p> <p><i>Onboard, the ship is fitted with:</i></p> <p><i>A multibeam sonar (Multibeam EM712 Kongsberg) for 3D seabed</i></p>	
--	--	--

	<p>mapping.</p> <p>A robotic vehicle (Perseo GTV I3 Harris) with powerful mechanical arms capable of operating in deep-sea environments.</p> <p>Acoustic instruments for measuring ocean currents (ADCP).</p> <p>Next-generation sensors for precise measurement of the chemical, physical, biological, and ecological parameters of marine environments.</p> <p>Remotely controlled systems for plankton collection and marine sediment sampling.</p> <p>The ship also includes a dedicated area for diving operations, equipped with spaces for tank refilling and gear storage. Additionally, the Dohrn carries a high-speed inflatable boat for deploying divers in areas inaccessible to the main vessel.</p> <p>At the highest point of the ship, there is a platform for drone takeoff and landing, enabling aerial surveys of the sea and coastal regions.</p> <p>The vessel's robust structure is designed to accommodate future scientific equipment, including a bathyscaphe and an autonomous underwater vehicle (AUV) for deep-sea exploration, allowing researchers to visually explore the most remote depths of the ocean.</p>	
--	--	--

ACCESS PROVIDED

Definitions

- Remote: the requested facility is operated by the owner's staff the presence of the user team is not required,
- Physical (In person/hands-on): the presence of the user team is required/recommended during the whole operation period

- Partially remote: the presence of the user team is required at some stage (depending on the user team's activity).
- Physical (In person/hands-on): the presence of the user team is required/recommended during the whole operation period

SPECIAL REQUIREMENTS

Num of access/Call;	TBD
Max period granted in the year:	TBD
Exclusion Periods in the year:	none
Max period granted per single user team (working day; days for R/V)	TBD
Max num of user team members admitted	10
Admin/Safety requirements for the user team (free itemized text)	TBD
Min # days/months of notice to the RI Resp/PI for preparing the access	2 months
Geographical Areas where RI/facility access is granted to user teams	MED SEA