Institute of Marine Science
CNR-ISMAR

www.ismar.cnr.it

CNR
www.cnr.it

DSSTTA
www.dta.cnr.it

ISMAR - IAS - IRBIM
www.ricercamarina.cnr.it

Mario Sprovieri

Consiglio Nazionale delle Ricerche

CNR ISMAR
ISTITUTO DI SCIENZE MARINE

CNR-ISMAR

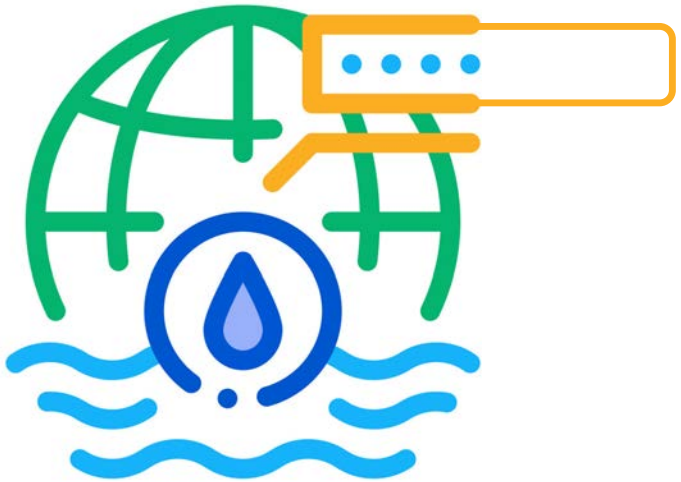
1 Headquarter (VENICE)

8 Branch Research Centres

OUR MISSION

Fundamental and Applied Research in physical, chemical, biological oceanography and marine geology.

CNR-ISMAR| AN INSPIRING KNOWLEDGE-ROLE FOR PLANETARY CHALLENGES



- ✓ **The ocean in the context of Earth and Planetary Science:** Climate change, Deep sea exploration, Ecosystem dynamics and services, Sea level rise
- ✓ **Oceanography and biogeochemistry:** Satellite observations, Experimental observation, Modelling
- ✓ **Marine geology:**
- ✓ Plate tectonics, Habitat mapping, Paleoceanography
- ✓ **Abiotic resources and deep-sea mining**
- ✓ **Natural and anthropic risks in the marine environment, European Directives (MSFD, WFD, MSP)**

CNR-ISMAR| Staff

306 CNR-ISMAR Staff *(Living numbers)*

225 Research & Support

175 Researchers and Technologists

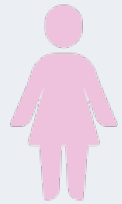
41 Technicians **9** Administratives

81 Associates, PhDs & Collaborators

12 Senior Associates
37 Research Grants
9 Collaborators
15 Associates (Collaborations/Research)
19 PhD. Students

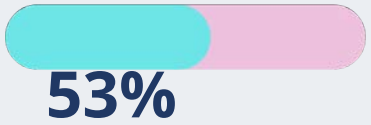
Total R/T staff (175)

56%

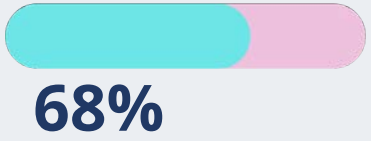


44%

Permanent (144)



Temporary (31)



CNR-ISMAR | Organization

VENICE
Headquarters

Director

Institute Council

Chief Research Branch Officer

TS
MI
BO
SP
FI
RM
NA
PA

Treasurer

Occupational Health and Safety Manager

Chief Financial Officer

Executive Management Office

Health and Safety Branch Supervisor

Financial Branch Managers

9 WORKING GROUPS

- Data Policy
- Strategic Planning
- Observation Systems
- Health and Safety
- Lab Infrastructure and Operations
- Modelling
- PhD Programs
- Satellite Oceanography
- Research Evaluation and Planning - ANVUR (National Agency for the Evaluation of Universities and Research Institutes)

15 SUPPORTING UNITS

- Financial Management
- Registered Mail Protocol System
- Travel and Expense Management Office
- Project Financial Management Office
- Procurement Office
- Tenders
- Human Resources
- Recruitment
- Research Infrastructures
- Information and Communications Technology
- Data Management
- Digital Innovation and Implementation
- Communications
- Transparency and Anti-Corruption
- Data Protection and Privacy

CNR-ISMAR| Ongoing Projects

TOTAL GENERAL BUDGET (2024) 54.389.312,67 €

16 HORIZON EUROPE

1 project as Lead Partner

CNR-ISMAR Budget 3.321.931,75 €

21 HORIZON 2020

Horizon 2020
European Union Funding
for Research & Innovation

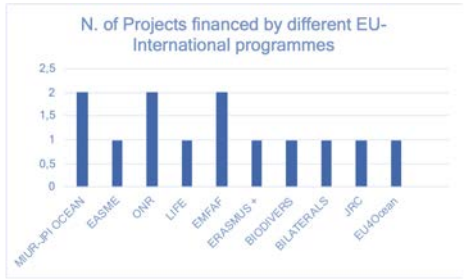
1 project as Lead Partner

CNR-ISMAR Budget 5.422.851,90 €

13 OTHER PROGRAMMES

1 project as Coordinator

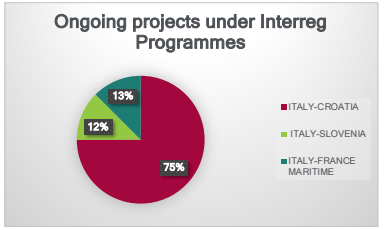
CNR-ISMAR Budget 2.742.818,95 €



8 INTERREG

CNR-ISMAR Budget 2.198.974,00 €

Co-funded by the European Union



21 ESA /COPERNICUS Tender Programmes

12 projects as Prime Contractor

CNR-ISMAR Budget 11.082.370,95 €

6 NATIONAL RECOVERY AND RESILIENCE PLAN

Finanziato dall'Unione europea NextGenerationEU

The CNR-ISMAR is part of 6 projects in 3 different investments axis all under the component n°2 (M4C2)

CNR-ISMAR Budget 29.620.365,12 €

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CNR-ISMAR | PhD Agreements

10 **PhD GRANTS Funded in 2023**

8 **Partnership AGREEMENTS**

2 **International Doctorate Projects**

Università Ca'Foscari Venezia

UNIVERSITÀ DEGLI STUDI DI BARI ALDO MORO

UNIVERSITÀ DEGLI STUDI DI NAPOLI FEDERICO II

ALMA MATER STUDIORUM UNIVERSITÀ DI BOLOGNA

UNIVERSITÀ DEGLI STUDI DI NAPOLI PARTHENOPE

SAPIENZA UNIVERSITÀ DI ROMA

COESIONE ITALIA 21-27 TOSCANA | Cofinanziato dall'Unione europea | Regione Toscana | GIOVANISÌ | ATU

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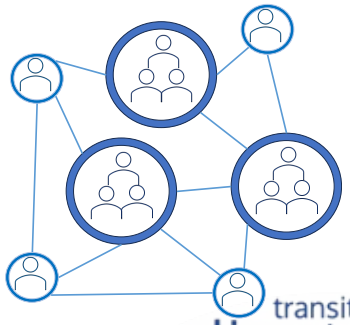
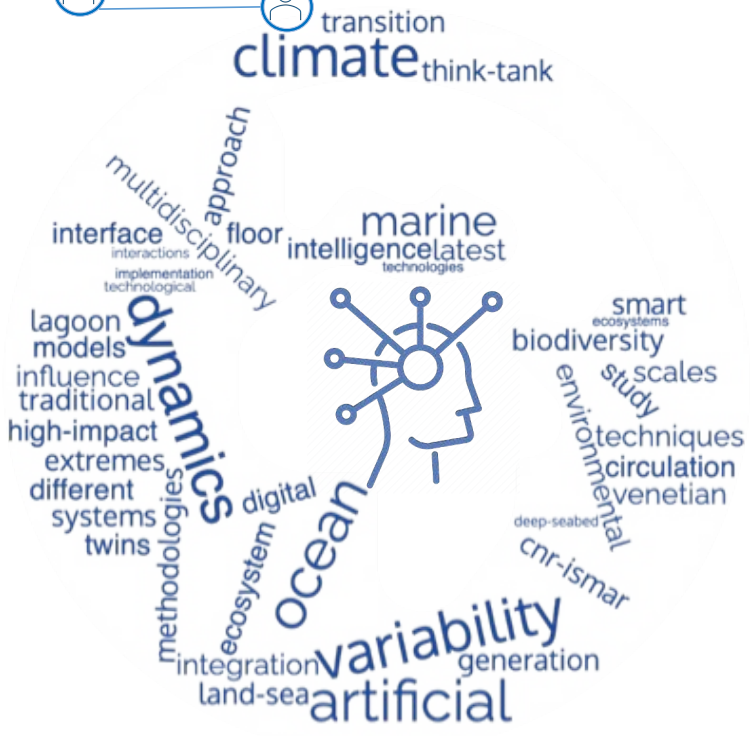
CNR-ISMAR| Goal Oriented Units





The Institute's GOUs are 'light' and flexible structures for the organisation, development and coordination of research activities, based on the voluntary **aggregation of individual staff units and individual research groups on scientific topics and questions deemed of relevant interest.**

GOU Proposals (2024)

1. Ocean floor dynamics – Deep-seabed dynamics
2. High-Impact Marine Extremes and Climate variability
3. Marine biodiversity at the interface between traditional methodologies, technological implementation and Artificial Intelligence: integration of latest generation techniques, technologies and study models (Smart Biodiversity)
4. Artificial Intelligence for Ocean Dynamics and Marine Ecosystems
5. Influence of environmental dynamics at different scales on the Venetian lagoon ecosystem: a multidisciplinary approach
6. Climate variability and ocean circulation
7. Digital Twins for the Ocean – the CNR-ISMAR Think-tank
8. Land-sea interactions in transition systems

The GOUs aim to **structure relational networks** and discussion forums (real 'think tanks') on research topics **with a strong interdisciplinary and innovative character.**

A potential preparatory phase for the launch **of the Goal Oriented Research Units (CnrGORU)**

CnrGOru Goal Oriented Research Unit

OCTOBER 2023 – Launch of the GOUs Call

DECEMBER 2023 – GOUs proposals submission

JANUARY 2024 – Proposals Revision Board

FEBRUARY 2024 – GOUs KICK-OFF

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CNR-ISMAR | Academic Engagement

Agreement with the **University IUAV** of Venice for “joint chairs”

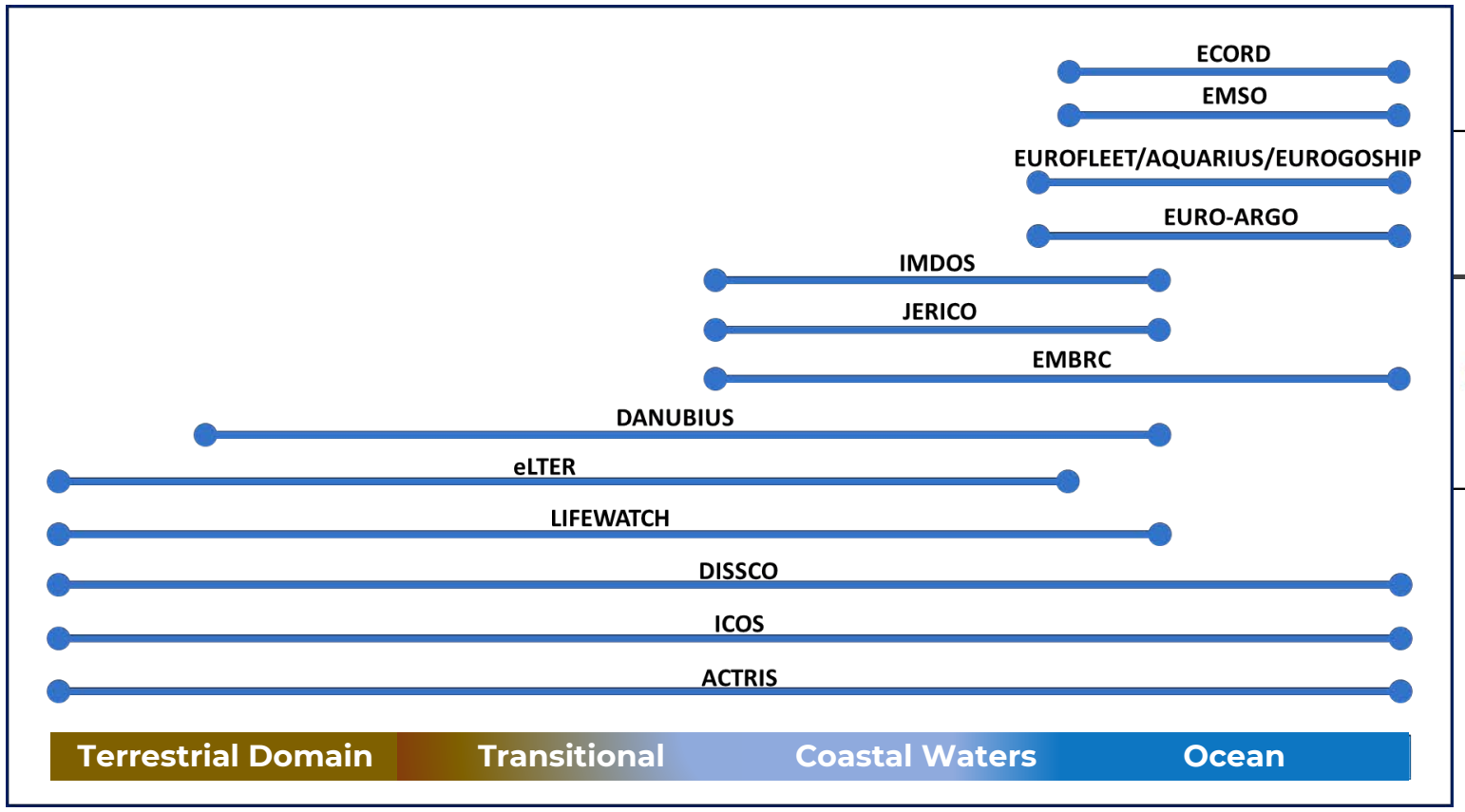
I U A V

Università Iuav di Venezia

Graduate courses: Civil Engineering, Environmental Engineering, Environmental Sciences

4 Classes: Oceanography, Coastal Engineering, Methods for practical oceanography, Tools for Maritime Spatial Planning

CNR-ISMAR| Research Infrastructures



JERICO-RI Science - Services - Sustainability

ECORD European Consortium for Ocean Research Drilling

Eurofleets+

ACTRiS

DISSCO Distributed System of Scientific Collections

ICOS Integrated Carbon Observation System

LifeWatch

International Centre for Advanced Studies on River-Sea Systems

Euro-Argo

emso ERIC

EMBRC European Marine Biological Resource Centre

eLTER

IMDOS Integrated Marine Debris Observing System

CNR-ISMAR participates a total of 13 ESFRI

CNR-ISMAR | Acqua Alta Oceanographic Tower

GPS Coordinates:
45° 18’ 51’’ N,
12° 30’ 29’’ E

Installation: 1970, refit 2018

Technical specifications

- Local electricity production (solar, wind, gen. diesel)
- Naval support vessels: Litus and Arethusa
- Radio link with the ISMAR headquarters for data transmission (also local storage)
- Aerial and underwater webcams
- Bed/kitchen/bathroom facilities
- Management with shipowner contract (also vessels, sailors)

CNR-ISMAR| Small Operational Vessels

Motorboat Litus (10.20 m)

Equipment:

- Generator Group G&M Marine DIESELITE 6 kW, 220 V
- Radar RAYTHEON 3200, range 32 mg
- Echo sounder ELAC LAZ 72.1
- Radiophone VHF LABES 510, 100 channels
- GPS, magnetic compass RIVIERA

Aretusa	
Gross tonnage	4.67 ton
Length	6.75 m
Width	2.48 m
Draught	0.87 m
Max n. of people on board	6 (including 1 crew member)
Motors	Suzuki gasoline outboard 110.3 kW (150 HP)
Navigation limit	12 NM

ARETUSA (6.75 m)

A vessel suitable for navigation in lagoon areas due to its shallow draft. Equipped with covered space, it allows sampling and monitoring activities of long duration.

Boston Whaler	
Gross tonnage	0.97 ton
Length	5.04 m
Width	1.71 m
Draught	0.50 m
Max n. of people on board	8 (including 1 crew member)
Motors	Yamaha gasoline outboard 51.5 kW (70 HP
Navigation limit	6 NM

BOSTON WHEALER (5.04 m)

A vessel suitable for navigation in shallow waters, it allows sampling and monitoring activities in environments characterized by shallow water and strong tidal range.

CNR-ISMAR | Observation Network

OBSERVING STATIONS

- Sea Stations (1)
- Seamarks (4)
- Buoys (1)
- Mooring (6)
- Coastal Stations (7)
- Hf-Radar (5)
- Lidar (1)

AUTONOMOUS SYSTEMS

- GLIDER “Teresa”
- EURO-ARGO
- OpenSWAP (Bologna)
- SWAMP (Venezia)
- Drifters (diverse tipologie)
- Openswap (Napoli)

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CNR-ISMAR | The newtork of marine Labs

The CNR-ISMAR Sea Laboratories are 13 entities each operating in multiple locations of the Institute, aimed at the treatment, study and analysis of the environmental matrices of Marine Sciences.

COLLECTION AND TREATMENT OF SAMPLES (SAMPLES)

CORE REPOSITORY (ISMAR_CoRe)

SEDIMENT OBSERVATION (O-SED)

SEDIMENTOLOGY AND GRAIN-SIZE (GRAIL)

OPTICAL MICROSCOPY AND DIGITALIZATION (MicrODig 2D/3D)

CONTAMINANTS AND MICROPLASTICS (Cont-Plas)

MICROBIOLOGY, MOLECULAR BIOLOGY, ECOTOXICOLOGY (Bio-Ecotox)

MARINE ECOLOGY (Eco-Mar)

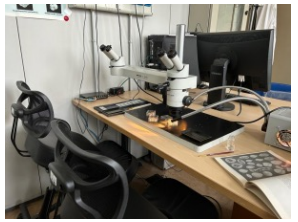
BIOGEOCHEMISTRY (BioGeoChem)

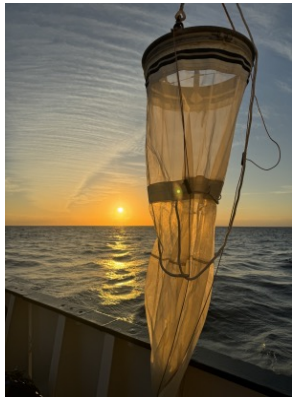
MICROCOSMS (μ-COSM)

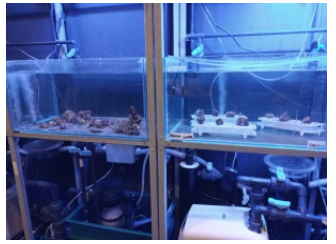
OCEANOGRAPHIC SENSORS (Ocean-I)

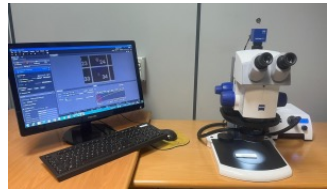
MAGNETISM AND PALEOMAGNETISM (PMAG)

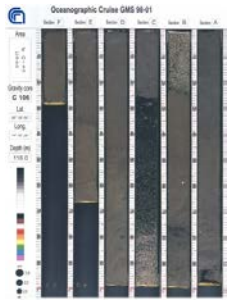
PHYSICS AND GEOCHEMISTRY OF SEDIMENTS AND ROCKS (GeoPhys)

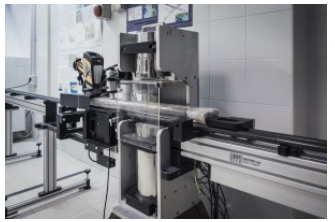












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CNR-ISMAR | Data Policy and Management

- DATA POLICY
- DATA MANAGEMENT PLAN
- A CHAIN OF DATA CONTROL

CNR-ISMAR| Biodiversity Science Gateway

BSG

Marine Biodiversity

Terrestrial Biodiversity

Urban Biodiversity

NATIONAL BIODIVERSITY FUTURE CENTER

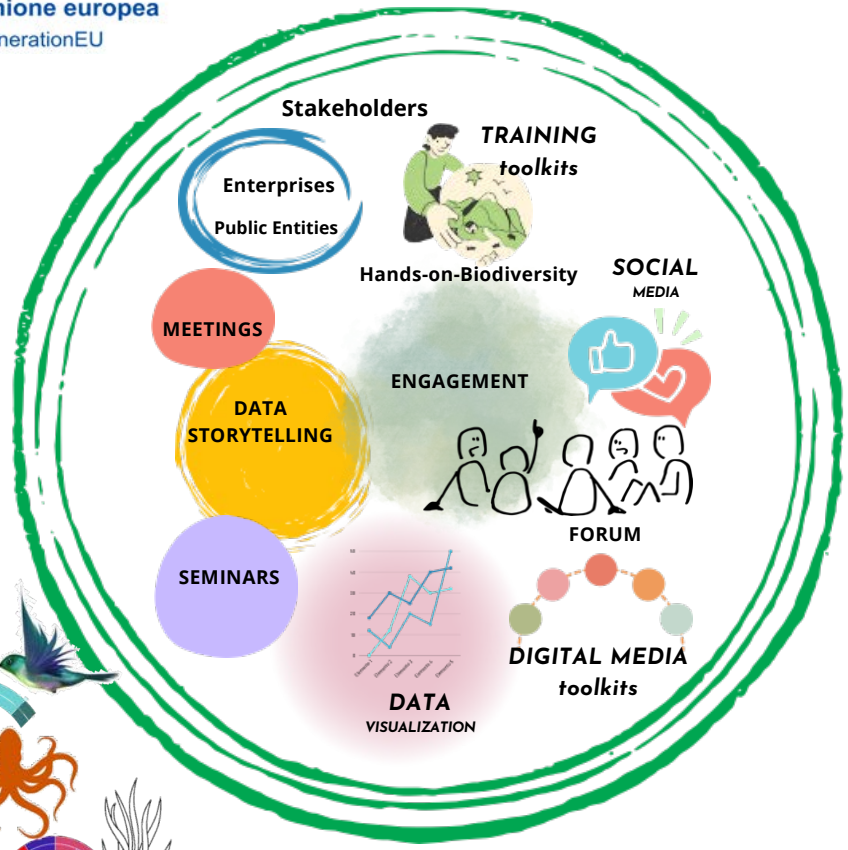
Finanziato dall'Unione europea NextGenerationEU

2 BSG Headquarters

Venice | Palermo

4 BSG Local Nodes

Fano| Rome| Milan| Lecce



Biodiversity | Professional Training| Outreach | Development

Consiglio Nazionale delle Ricerche

CNR ISMAR

CNR-ISMAR | National and International Satellite Activities

ISMAR contributes to both components of **Copernicus**

Space component

Design of future missions/Mission Advisory Groups, active participation to validation teams(activities

esa
EUMETSAT
ASI Agenzia Spaziale Italiana

Copernicus Services

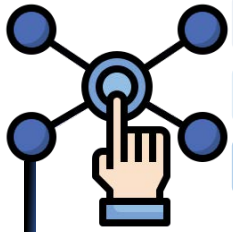
Atmosphere | Marine | Land | Climate Change | Security | Emergency

ECMWF

European Commission

MERCATOR OCEAN INTERNATIONAL

GEO GROUP ON EARTH OBSERVATIONS



- Design of Future Observational Systems
- Development of Retrival Algorithms (L0-L2)
- CAL/VAL Activities
- Development of Combining/Interpolating Algorithms (L3-L4)
- Implementation of operational processing chains
- Data access and Archive management
- Downstream Service Development
- Scientific Applications

CNR-ISMAR | Exhibitions and Outreach

Anthropocene Exhibition

2023 5th May - 5th July

5300 Visitors

Teaching experience: **17** classes, **2** summer schools, **30** PCTO students

Side Events

- Concert Arca di Ottodix
- Biodiversity Day
- WS Euclipa
- Seminar Christian Clauwers

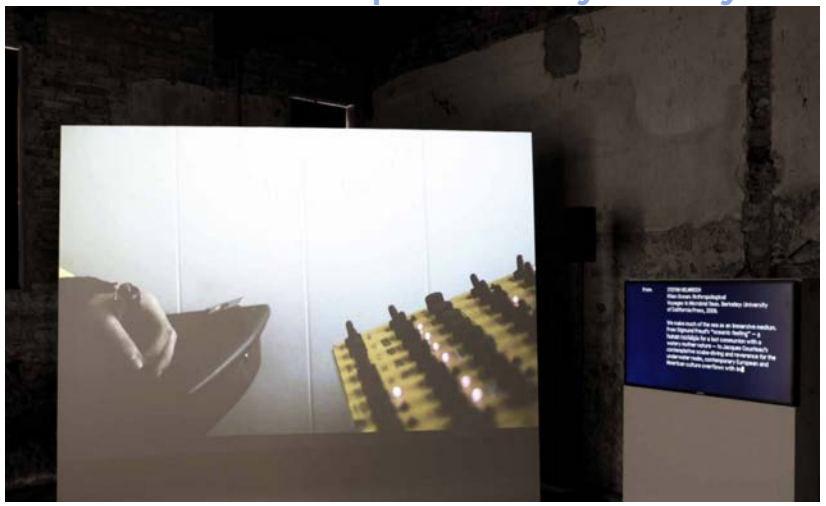
CNR-ISMAR| Exhibitions and Outreach

2017 Leviathan

19000 Visitors **Topic: Art & Science**

2018 Prospecting Ocean

8548 Visitors **Topic: Economy & Policy**

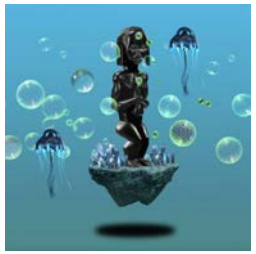


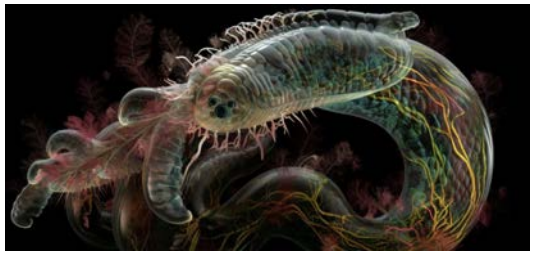
2019 Post Hoc

1000 Visitors **Topic: Scientific Concepts**

2024 Swell of Spæcies

Topic: Art & Plankton Biology





A cooperation with TBA21 e LAS Foundation (Berlin) Artist: Jospèfa Ntjam

Consiglio Nazionale delle Ricerche

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Thanks for your attention!

Consiglio Nazionale delle **Ricerche**

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