

Exploring collaboration opportunities among RV operators: from Italian EEZ to Med Sea

L. Evangelista, G. Magnifico and E. Koning



RV 'G. Dallaporta' cruise programme 2021

Ship time request: 34 scientific cruises + 3 ad-hoc cruises; 535 days at sea (available 10 months)

Adopted criteria to develop the cruise programme 2021:

- Merging scientific cruises
- Reducing the requested ship-time
- Excluding scientific cruises addressed to marine geology due to technical and logistics issues
- Reducing the number of passages from Adriatic to Tyrrenean sea in order to optimize the operations at sea and to meet the deadlines of particular institutional cruises addressed to the fishery data collection within the Italian National Fisheries Data Collection Programme
- Planning the activities from November to December 2021 in the Adriatic sea, where RV 'G. Dallaporta' home port is based (Ancona)



RV 'G. Dallaporta' - Main Technical Features

- Category: **Regional**
- Tonnage: 285 Tons
- Length overall: 35.3 m
- Breadth: 7.7 m
- Depth: 4.1 m
- Draft: 3.0 m
- Speed: 11,5 kn
- Drive system: 1100 CV
- Crew: 8 people
- Scientists: 12 people
- Built year: 2001



Ship time scheduled:

- **1.2.2021 – 23.12.2021 time window**
- **28 scientific cruises**
- **326 days at sea**
- **11,24 average days for survey**

How meet the needs of CNR Marine Scientific Network?

- Chartering a research vessel
- Establishing collaboration among RV Operators
- Exploring collaboration opportunities among European Organisations
- Exploring opportunities within the activities of the Eurofleets+ project

CARG 21 01

The scientific cruise aims to the characterization of the seafloor sedimentology and lithology, thus calibrating the facies defined by the acoustic data. Furthermore, it intends to investigate the stratigraphy of the substrate by identifying the acoustic horizons extending from the coast towards higher water depths.

To fulfil the cruise goals the cruise will focus on the following objectives: 1) detailed seafloor sampling by means of grab, box- corer and SV104 corer; 2) acquisition of seismic profiles by means of one or more acoustic sources (sparker and subbottom) and multibeam survey.

The expected results are: 1) geological calibration of the seabed acoustic backscatter data and 2) analysis and reconstruction of the stratigraphic successions of the seafloor

Requirements:

- Availability of 10 days in June or September
- Operating in the Gulf of Gaeta, located in the central Tyrrhenian Sea, East sector
- Operational capability: sediment sampling; morpho-bathymetric and reflectivity survey of the seabed up to 30 meters of depth, seismic profiles survey



***RV Lighea – coastal vessel - 14.5m length.
Equipped with scientific instrumentation including
a ROV (max depth 500m), for coastal and offshore
research. 1 < 12m inflatable with outboard engine
115hp equipped with GPS and VHF***

Establishing collaborations among Italian RV Operators

Access to RV Laura Bassi

In 2019, thanks to a dedicated funding program by the Ministry of University and Research (MUR), Italy acquired a research ship with ice-breaking capabilities to conduct research activities in the polar regions.

The research vessel, named RV Laura Bassi, is owned by the National Institute of Oceanography and Applied Geophysics in Trieste and receives funds to conduct research activities from the National Research Program in Antarctic.

Founding agency and Coordinator: OGS, CNR, ENEA (Italian National Agency for New Technologies, Energy and Sustainable Economic Development) and CSNA (National Scientific Committee for Antarctica) are managers of the RV Laura Bassi scientific activities and provide its economical support.

An extensive instrumental upgrade to the vessel is currently underway, with the contribution of CNR, to convert it into a modern multipurpose scientific platform that can serve different scientific communities working on various research fields, including physical, chemical and biological oceanography, paleoceanography, geophysics, marine geology and atmospheric



The ice-breaker RV Laura Bassi

Establishing collaborations among Italian RV Operators

Access to RV Laura Bassi

At the end of the last year (December 2020) a call for access to the RV Laura Bassi ship time (max 2 days at sea/cruise) during its passage from the Mediterranean Sea to the North Atlantic planned for this spring-summer, before the Arctic expedition, was open.

For the planning and the organisation of the scientific activities onboard the RV Laura Bassi, OGS has established the following bodies:

- **Scientific Committee** with representatives of MUR, CSNA, CNR and ENEA
- **Technical Operations Committee** coordinated by the Director of the OGS Naval Infrastructure Centre with representatives from CSNA, CNR and ENEA.

CNR

Submitted proposals for scientific cruise: #12 + #2 proposals as collaboration CNR/OGS

Granted scientific cruises: #5 + #2 scientific cruises as collaboration CNR/OGS

Total days at sea: #11

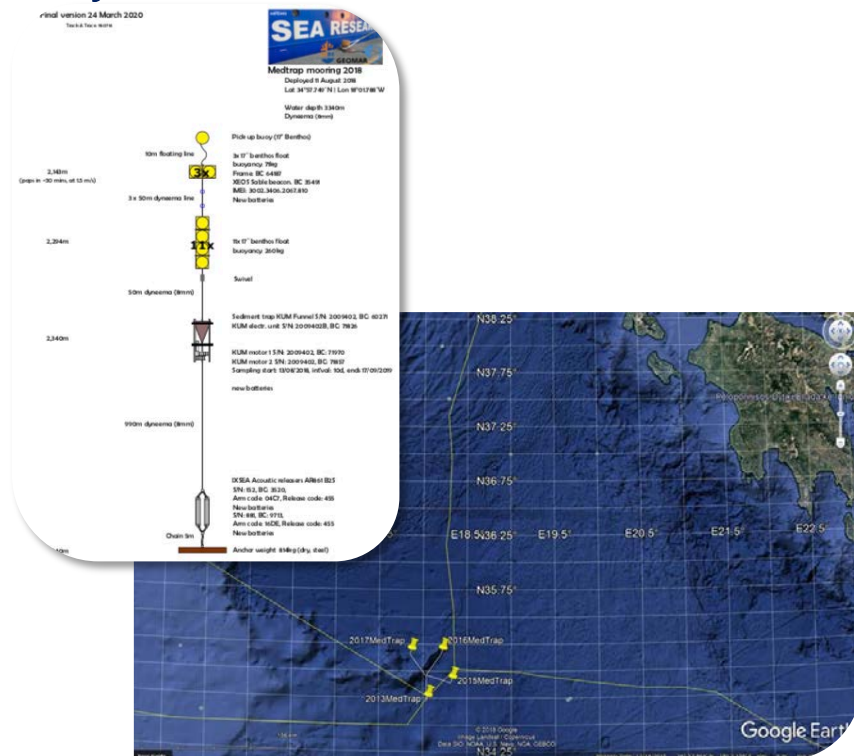
Main Disciplines: marine geology (#4), marine biology (#1) and oceanography, including remote sensing application (#2)

Investigated area: Adriatic and Southern Tyrrhenian Sea, Ionian Sea and Strait of Sicily, a passage from Italy to Norway, and from Norway to Svalbard.

Establishing collaborations among European RV Operators

Access to RV G. Dallaporta

Bilateral agreement between NIOZ and CNR to meet the need of reduce the transit of RV Pelagia in the Med Sea for maintenance of a scientific instrument: a simple mooring with a sediment trap. The mooring is placed at 3384m water depth and located in the furthest part of the Italian EEZ, SE of Sicily.



The roadmap:

- Regular communication between NIOZ and CNR since November 2020
- Agreement on a feasible ship-time for the activities at sea
- Scheduling of the cruise in July 2021
- Definition of the scientific team including NIOZ and CNR researchers
- Finalization of a MoU

Establishing collaborations among European RV Operators

Objective

Memorandum of Understanding

The overall aim of this memorandum is to intensify the opportunities for joint research activities between CNR and NIOZ scientists. The collaboration is based on existing research programmes to share access to research vessels, equipment and between the partners.

The purpose of this memorandum of understanding (hereafter MoU) is to outline the specific arrangements through which the present collaborations can be strengthened.

III. Specific arrangements

1. **Access, physically and/or remotely, to RV Pelagia for CNR researchers during NIOZ scientific cruises in the Mediterranean Sea or other European waters of interest for CNR and for NIOZ researchers to the CNR research vessels.**
2. **Access for NIOZ scientists to the CNR vessel RV Dallaporta for the annual maintenance of the NIOZ Medtrap mooring in the Mediterranean Sea, within the Italian Economic Zone.**
3. **Installation of CNR sensors on NIOZ Medtrap mooring in the Mediterranean Sea.**
4. **Scientific collaboration on projects of mutually interest.**
5. Both institutions need to approve the joint research programmes.

IV. Period of agreement

This basic memorandum will get in force at the date of signature by the parties and will be valid for two years. This memorandum is renewable, subject to written agreement of the two Parties. The terms of the MoU may be revised by the Parties if mutually agreed upon. This MoU may be terminated at any time, by any of the signatories, subject to a 6-months written notice.

Exploring collaborations among European Organisations

CNR office regularly receives notice of scientific cruise of European Research Institutions, no-profit organisations and private companies by the Italian Authorities asking for permission to execute activities in the Italian EEZ.



YEAR	ORGANIZATION	RESEARCH VESSEL	CRUISE
2018	NIOZ	RV PELAGIA	-
2018	IFREMER	RV L'EUROPE	TELEPRESENCE
2018	ALCATEL SUBMARINE NETWORK	ILE DE SEIN	-
2019	IFREMER	RV ANTEA	HIPPOCAMPE
2019	GEOMAR	RV POSEIDON	N.POS538
2019	SEA-PLASTIC FOUNDATION	-	-
2019	IFREMER	RV THETYS 2	FUMSECK
2019	IFREMER	-	MOOSE-GE 2019
2019	TARA FOUNDATION	RV TARA	TARA EXPEDITION
2020	GEOMAR	RV ALKOR	N. AL532
2020	IFREMER	RV POURQUOI PAS ?	MOOSE-GE 2020
2020	GEOMAR	RV SONNE	N. GPF19-02-012
2020	GEOMAR	RV METEOR	N. M168
2020	IFREMER	RV POURQUOI PAS ?	FOCUS X1

Exploring collaborations among European Organisations

Cruise: SEA Plastics 2021

Organisation: SEA Plastic Foundation

Period: 5 May 2021 – 15 June 2021

Scientific objectives: Sea Plastic 2021 Expedition aims to built an experimental approach to evaluate the different analysis methods of microplastic into West Med: France, Spain and Italy



*Outremer-45 Catamaran
IM'POSSIBLE*

Specific arrangements:

- SEA Plastic will sample water at 5 stations in the Tyrrhenian Sea of interest for CNR
- CNR will characterise the microbial flora on the plastics and the plastic polymers
- Joint scientific papers
- Joint dissemination events



Exploring collaborations among European Organisations

Cruise: ZEMED2021

Organisation: French Service hydrographique et océanographique de la

Period: 1 July 2021 – 20 September 2021

Research Vessel: RV Beautemps-Beaupré



RV Beautemps-Beaupré

Cruise: MOOSE-GE

Organisation: IFREMER

Period: 8 June 2021 – 15 July 2021

Research Vessel: RV Thalassa



RV Thalassa

Cruise: FOCUS G1

Organisation: IFREMER

Period: 5 August 2021 – 10 September 2021

Research Vessel: RV THETYS II



RV Thetys II

Exploring opportunities within EFs+ project



TALPRO2022

Research Vessel: RV Belgica II

Region: Algero-Provencal Basin, Sicily Channel,
Tyrrhenian Sea, Ligurian Sea

Cruise Leader: Dr Katrin Schröder, CNR-ISMAR

Physical Oceanography

Looking forward

- Leverage the Regional Focus in ERVO
- EUROFLEETS+ project within WP8 task 8.1 – step #3: the identification of pilot groups, at both pan-European and regional dimensions or for thematic area, based on the spare vessel capacity, to be the test-bed of the developed operational and funding model
- EUROFLEETS RI to foster and support regional collaboration (e.g. HELCOM, EuroGOOS Regional Operational Oceanographic Systems-ROOS)

THANK YOU

GRACIAS
ARIGATO
SHUKURIA
JUSPAXAR
DANKSCHEEN
TASHAKKUR ATU
YAQHANYELAY
TINGKI
BIYAN SHUKRIA
SUKSAMA
EKHMET
MERSE
SPASIBO
DENKAUJA
HENACHALHYA
UNALCHEESH
HATUR
GHI
EROUJU
SIKOMO
MAKETAI
MINMONCHAR
BOLZIN
MERCIE
GOZAIMASHITA
EFCHARISTO
AGUYJE
FAKAAUE
KOMAPSUMNIDA
LAH
MAAKE
DHAANYABAAD
ATTO
WADEEJA
MAITEKA
HUI
YUSPAGARATAM
CHALTU
NUHUN
SHACHALHYA
TAVTAPUCHI
MEDAWAGSE
BAIRKA
GAEJTHO
MERASTAWHY
SAUNCO
MERASTAWHY
GAEJTHO