

SO.PRO.MAR. S.p.A. fleet consists of the following vessels:

Minerya Uno: Multipurpose vessel acquired in 2010; she can be used by public authorities and private companies.

Vettoria: Currently managed on behalf of Stazione Zoologica Anton Dohrn (Zoological Station Anton Dohrn).

Vega Uno: Specially fitted for coastal surveys and fast deployments (now under refitting).

Coastal motorboats Urano and Mercurio (under construction).







SO.PRO.MAR. ashore structure

<u>Maritime dept</u>: takes care of ship handling with specific attention to personnel and ships safety and environment protection (SafetyManagement System), Work Health and Safety, Ship Security (ISPS Code).

<u>Technical dept</u>: is specialized in scientific instruments management and multidisciplinar surveys for private companies and public authorities. Procedures are certified under ISO 9001/2008 SO.PRO.MAR. manual.

<u>Provision dept</u>: is focused on food and technical supplies, administrative and harbour procedures. Procedures are certified under ISO 9001/2008 SO.PRO.MAR. manual.

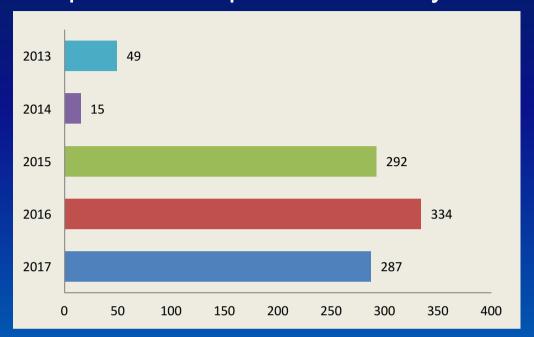




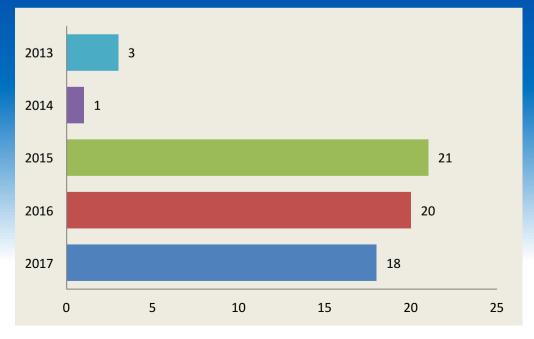


Research vessel	Minerva Uno	
Commissioning	2003	
SO.PRO.MAR. service	2010	
Lenght overall	46.6 m	
Breadth	9.0 m	ORBIT
Gross register tonnage	615 GT	
Operational speed	10.8 knots	
Main engine (KW)	2x746	
Endurance	30 days	MINERA UNO
Crew	12	
Scientific personnel	13	
		PRO PRO MAR

Before 2015 RV Minerva Uno was used mainly for offshore surveies for private companies and only occasionally for C.N.R..



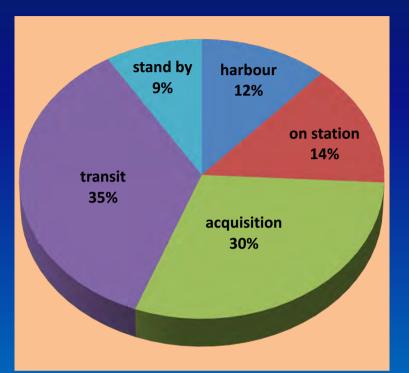
RV Minerva Uno days at sea for C.N.R. from 2013 to 2016 and 2017 schedule.



RV Minerva Uno number of surveies for C.N.R. from 2013 to 2016 and 2017 schedule.



Hourly Time Sheet



Nautical Miles



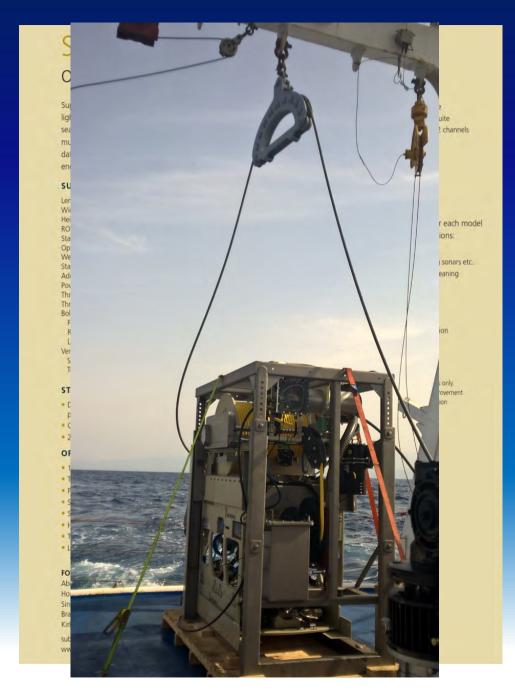
The diagrams above summarize RV Minerva Uno activities during 2016 for C.N.R., in terms of hours for type of work and miles run by the vessel.

Transit time values are still impressive, especially considering Mediterranean spaces, but they look more balanced than last year. In terms of nautical miles run, transit has still the great majority.









ROV Super Mohawk used to perform visual inspections at depths up to 3000 meters.

The system consists of a Observed Class ROV with a TMS (tether managment system), a hydraulic winch containing 3000 meters of armored cable and container for control and data acquisition.



ROV operations are performed usually in daytime hours up to 12 hours.

Sea: maximum operational 2 (douglas),

Wind: maximum operating force 2 (beaufort)







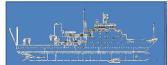


Control Room





Robotic Arm















.. On Safety Certification

The davit SHAT HARDING SEA-MOR 20-10, for launching the Rescue Boat is certified LSA-Code, MSC 81(70) and SOLAS. During an inspection of the Italian Coast Guard, the davit was declared not conform with the LSA-Code because it is equipped with a manual arm.

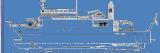
This question was discussed at national level and extended to the General Command of the Italian Coast Guard.



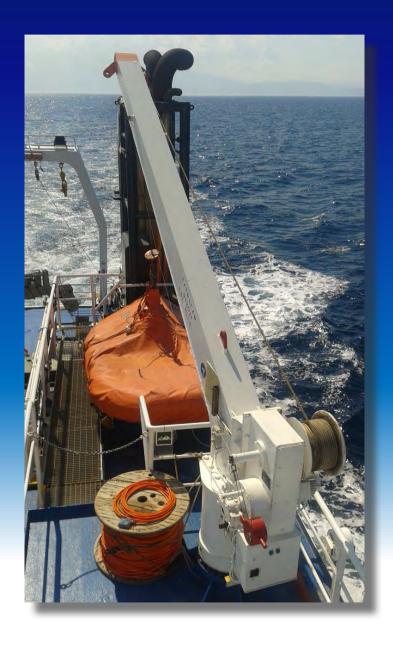








... In the meanwhile



In London, during the fourth session of the IMO Sub-Committee on Ship Systems and Equipment (SSE 4), the Republic of Korea proposed the use of manually operated launching appliances for small rescue boats.

The Sub-Committee agreed to allow the application of the proposed amendment for rescue boats up to a limit of 700 kg:

- 1) for cargo ships only;
- 2) the designated weight limit of the boat should include the crew and that embarkation should take place prior to swinging out.

The MinervaUno and the Rescue Boat are fully complaint with these requirements.







Cyber Security

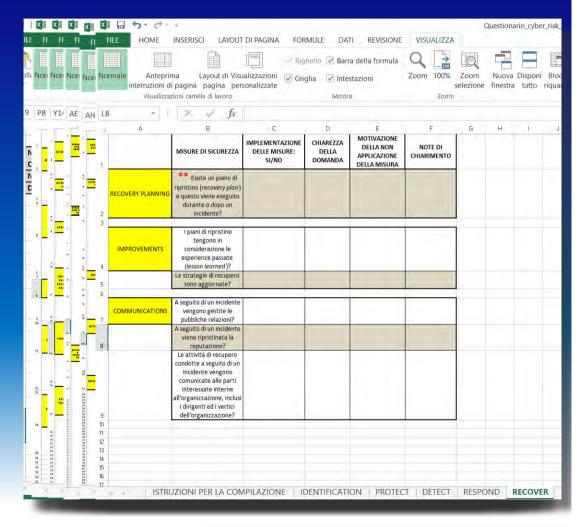


An increased interest in cyber security has been developed in 2017.

Cyber security includes:

- Accident to the ship IT systems that may cause a loss to the safety of the RV;
- Illegal actions against the ship and the operator IT systems

In Italy, the Governmet sent a questionnaire for the cyber risk management to the maritime companies









Cyber Security

In March 2017, the **Danish Threat Assessment Branch** under the Centre for Cyber Security published the following assessment



Key Assessment

- The general cyber threat against the maritime sector is directed against the commercial business of the maritime sector. The cyber threat generally does not pose a direct threat to the physical security of maritime operations.
- The threat from cyber criminals is VERY HIGH. Sector specific threats include cyber-enabled smuggling and theft, whereas non-sector specific threats include ransomware and cyberenabled fraud.
- The threat of cyber espionage against the maritime sector is VERY HIGH. Several states
 systematically use cyber espionage as a means to achieve industrial and business advantages
 and promote political and economic interests.
- The threat of destructive cyberattacks against the maritime sector is LOW. Maritime lines of communication, including vessels and ports, may be targets for destructive cyberattacks during times of conflict.
- The threat of cyber activism against the maritime sector is LOW. The shipping industry does not
 enjoy a high degree of attention from cyber activists, and as such is not a high-profile target.
- The threat of cyber terrorism against the maritime sector is LOW. Terrorist groups have only shown a limited interest in the maritime sector. Also, terrorists lack the capabilities to launch spectacular cyberattacks at the maritime sector.

IMO, EU and other Governments are developing rules and standards that will probably become compulsory in the next years.

The United States and others, including ICS and BIMCO, expressed support for the current recommendatory *Interim* guidelines on maritime cyber risk management (MSC.1/Circ.1526) and the industry guidance which encourages cyber safety and security risk management through the International Ship and Port Facility Security (ISPS) and International Safety Management (ISM) Codes.





MLC 2006 – Researchers are not "passengers" neither "maritime" ... what are they?

The Maritime Labour Council (2006) and the Special Purpose Ship Code (2008) requirements for researchers on board (.. Definied as SPECIAL PERSONNEL in the SPSC) are well know by now, but

... during the 97th session of the IMO Maritime Safety Committee was held in London from 21 to 25 November 2016, the Committee adopted resolution MSC.418(97) on "Interim Recommendations on the safe carriage of more than 12 industrial personnel on board vessels engaged on international voyages". "Industrial personnel means all persons who are transported or accommodated on board for the purpose of offshore industrial activities performed on board other

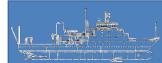
"Such industrial personnel should not be considered or treated as passengers under SOLAS regulation I/2(e)."

vessels and/or other offshore facilities and meet the criteria set out below."



Requirements for Industrial Personnel

- 1. be not less than 16 years of age;
- 2. prior to boarding the ship, receive appropriate safety training, meeting the standard in paragraph 2.1 of section A-VI/1 of the STCW Code. Administrations may accept other industrial training standards such as those of the Global Wind Organisation (GWO), Offshore Petroleum Industry Training Organisation (OPITO), Basic Offshore Safety Induction and Emergency Training (OPITO accredited), if they consider these appropriate alternatives;
- 3. receive on board ship specific safety familiarization that includes, but is not limited to, the layout of the ship, and handling of the safety equipment, as appropriate. The standard in paragraph 1 of section A-VI/1 of the STCW Code, or equivalent, should be used as the standard;
- 4. be familiarized with specific procedures, e.g. transfer procedures on and off the ship while at sea, as appropriate;
- 5. be accounted for in the ship's life-saving equipment;
- 6. be equipped with personal protective clothing and equipment suitable for the safety risks to be encountered both while on board the ship and being transferred at sea;
- 7. meet appropriate medical standards. The standard in section A-I/9 of the STCW Code, applicable to engineers, or equivalent, may be used as a standard.







MLC 2006 – Researchers are not "passengers" neither "maritime" ... what are they?

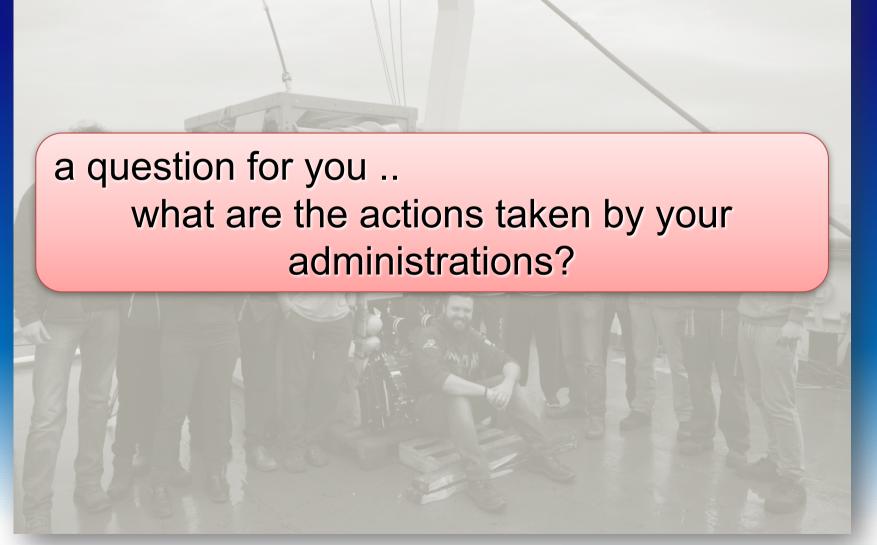


















.. Still about Certifications



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MANUALE DELLA QUALITÀ	MQ Rev. 9 del 31/05/2011 Pagine 1 di 1	
Frontespizio		



Ship Energy Efficiency Plan SEEMP : SEEMP Shortcut MARSIG Revision MARSIG mbH : 01-Mar-12 : 1 of 8 Page

Ship Energy Efficiency Plan

Resolution MEPC.203 (62) – Amendments to the Annex of the Protocol of 1997 to amend the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (inclusion of Regulations on Energy Efficiency for Ships in MARPOL Annex VI), adopted on 15 July 2011

2012/03/01	1st issue	Review by Captain and Superintendent Issued for Approval	ISM	DP	Captain	FM
Date	Revision	Revision Description	Prepared	Checked	Checked	Approved

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