

NATO STO CMRE Update

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Background



1959

'SACLANT ASW Research Centre' commissioned at La Spezia, Italy.



During its first decade, the Centre's mission focused on anti-submarine warfare. To support this effort, an old freighter, the *Aragonese*, is repurposed as a dedicated research vessel.



In the 1970s, the challenge of detecting submarines in shallow water was a priority, with a new emphasis on shallow water oceanography and acoustics.



1988
NATO Research Vessel (NRV) *Alliance* launched as one of the quietest ships afloat.



The Centre designs a recoverable bottom-mounted underwater platform capable of measuring the currents in the layers above yet resistant to fishing trawlers.



In 2003, the Centre's name changes to 'NATO Undersea Research Centre' (NURC), as it assumes a pivotal role in advancing communications between autonomous underwater systems.



2012
Name changes to 'CMRE' with a refreshed mission to conduct maritime scientific research, technology development and experimentation.



This decade has seen an increased focus on CUI protection, countering unmanned systems, drifting mines, UW positioning & navigation, and secure communications.

Oceanography

Low Frequency Active Sonar

Collaborative Autonomy

Data Science

Ocean Acoustics

Triplet Array

UW Comms Command & Control

Passive Sensing

Synthetic Aperture Sonar

CMRE Mission

“To organise and conduct scientific research and technology development and deliver innovative and field-tested S&T solutions to address the defence and security needs of the Alliance”



Our three pillars



Who we are

■ STAFF:

144 Civilians - made up of

- 40% Scientists
- 40% Engineers
- 20% Support and Administrative

Additionally:

40 personnel consisting of Military Representatives, Visiting Researchers and Contractors

VESSELS:

- NRV Alliance
- CRV Leonardo



What we do

CMRE PROGRAM OF WORK



Autonomy for Anti-Submarine Warfare (AASW)

- Secure interoperable and scalable detection, classifying and prosecuting systems with reduced risks



Autonomous Naval Mine Countermeasures (ANMCM)

- Search map and classifying thanks to onboard intelligence and novel sensing



Maritime Unmanned Systems Enablers (MUSE)

- Enablers for connectivity, planning and interoperability

Critical

Undersea

Infrastructure



Data and Environmental Knowledge and Operational Effectiveness (D-EKOE)

- Decision support through methodologies for manned and unmanned ASW operations, analytics and behavioral analysis



Climate Change and Security (CC&S)

- Analysis of the impact of CC on maritime operations with a focus on Arctic transformations



Maritime Resources Enablers (MARE) Data Management

- Enhancing data management capabilities and making data products accessible to external stakeholders

Who we work with



Maritime Operations



Key functions

- The safe, cost effective management and operation of NATO's research vessels.
- Ensuring sea-going capabilities in support of CMRE's scientific research and experimentation activities.

Research Vessel Management

Since 2020 – What has changed

- 2022 - New Technical Management Contract. BIMCO SHIPMAN 2009
- Increased our Team strength
- New PMS - Tero Marine TM Master
- Engaged in Cadet programs
- Starlink!



BIMCO SHIPMAN 2009 STANDARD SHIP MANAGEMENT AGREEMENT PART 1	
1. Place and date of Agreement	2. Date of commencement of Agreement (Ctns 2, 12, 21 and 22)
3. Owners (names, place of registered office and law of registry) (Ctn 1)	4. Managers (names, place of registered office and law of registry) (Ctn 1)
(i) Name	(i) Name
(ii) Place of registered office	(ii) Place of registered office
(iii) Law of registry	(iii) Law of registry
5. The Company with reference to the SHIPMAN 2009 Code (state name and IMO Unique Company Identification number. If not Company is not party then state state registered office and principal place of business) (Ctns 1 and 10)	6. Technical Management (state 'yes' or 'not' as agreed) (Ctn 4)
(i) Name	
(ii) IMO Unique Company Identification number	
(iii) Place of registered office	
(iv) Principal place of business	
7. Crew Management (state 'yes' or 'not' as agreed) (Ctn 5)	8. Commercial Management (state 'yes' or 'not' as agreed) (Ctn 6)
9. Crewing Services period (only to be filled in if 'yes' stated in Box 7) (Ctn 5(a))	10. Crew Insurance arrangements (state 'yes' or 'not' as agreed) (Ctn 5(b))
11. Insurance arrangements (state 'yes' or 'not' as agreed) (Ctn 7)	12. General management (state 'yes' or 'not' as agreed) (Ctn 10)
13. Interest (state rate of interest to apply after due date to outstanding sums) (Ctn 10)	14. Annual management fee (state annual amount) (Ctn 12(a))
15. Manager's nominated account (Ctn 12(a))	16. Daily rate (state rate for days in excess of those agreed in budget) (Ctn 12(b))
17. Lay-up period / number of months (Ctn 12(c))	
18. Number of months termination period (Ctn 21(a))	19. Management fee on termination (state number of months to apply) (Ctn 21(b))
20. Severance Costs (state maximum amount) (Ctn 22(b)(i))	21. Specific Termination (state alternative (Ctn 22(b), 22(c) or 22(d)) if (Ctn 22(b)) place of arbitration must be stated) (Ctn 23)



TM Master

NRV Alliance

- Global Class
- Ice Capable (ICE C)
- Acoustically quiet
- Built 1988, Fincantieri (IT)
- LOA 93m, Beam 15.2 m, Draft 7.2 m
- 400 m² of laboratory space
- Complement of 44 crew and 25 scientific staff



CRV Leonardo

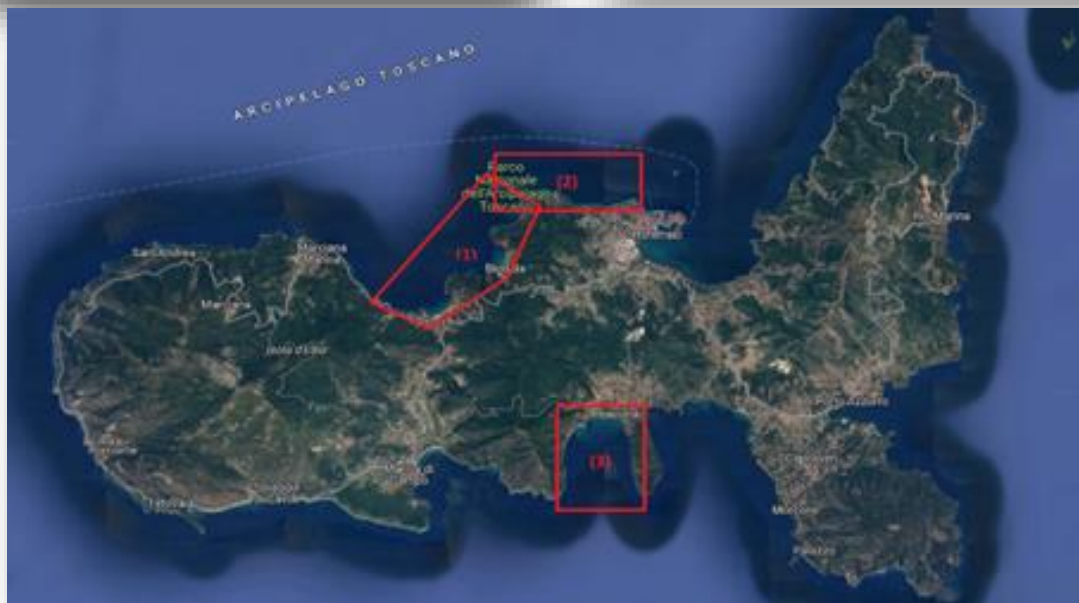
- Coastal/Regional Class
- Dynamically Positioned
- Acoustically quiet
- Built 2002, McTay Marine, UK
- LOA 28.6 m, Beam 9 m, Draft 2,5 m
- 35 m² of laboratory space
- 12 Berths, Able to accommodate up to 20 people for daily trips



Program of Work 2024 NRV Alliance



Program of Work 2024 CRV Leonardo

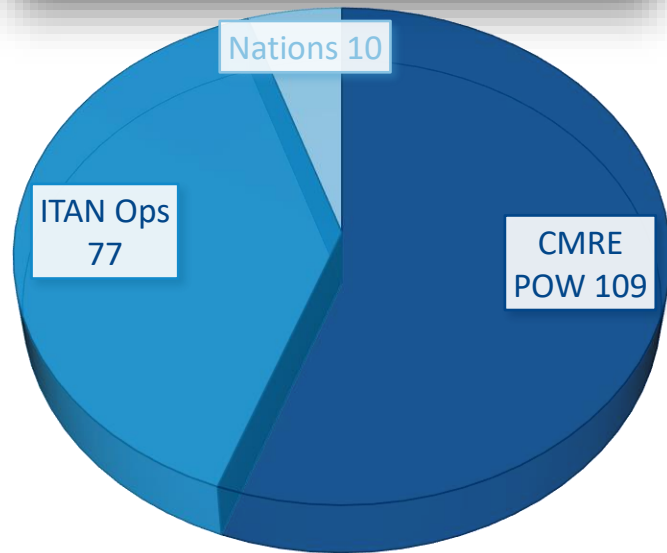


Vessels Utilization 2024

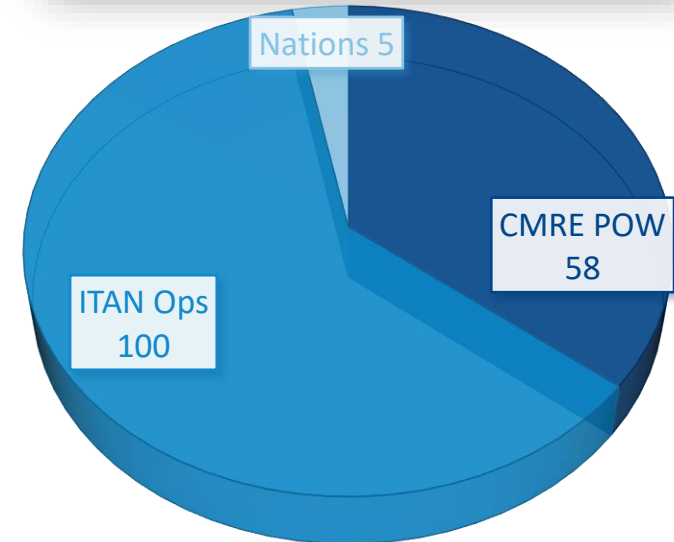
	TOTAL OPS + TRANSIT + MOBILISATION	CMRE OPS + TRANSIT + MOBILISATION	ITAN OPS + TRANSIT + MOBILISATION
ALLIANCE	196	119	77
LEONARDO	163	63	100



Vessels Utilization 2024 by Customers



**NRV ALLIANCE
UTILIZATION 2024**



**CRV LEONARDO
UTILIZATION 2024**

CMRE Modernization

Approved scope (within 10 years)

- ✓ Replacement / update of obsolete **EQUIPMENT**
 - Unmanned systems and new sensing capability
 - Lab Prototyping equipment
 - IT & Networks
- ✓ Restoration of **CMRE BUILDING**
 - New laboratory and workshop spaces



CMRE Modernization

Sea Going Capability

- Additional analysis for sea-going capability
- Options available in the charter market from both Nations and Commercial providers
- Resource implications for potential new construction: life cycle costs, crewing
- Impact of modelling and simulation on RV utilization



Thank You

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