The only event dedicated to seabed defence which debriefs the lessons from NATO's largest exercise for Unmanned Maritime Systems

Defence iQ

In association with REPMUS 2025



# SEABED SECURITY

30 September – 1 October 2025 Tróia, Portugal

## PROTECTING CRITICAL UNDERWATER INFRASTRUCTURE AMID INCREASING SEABED ACTIVITY

### LEADING PERSPECTIVES ON THE UNDERWATER BATTLEFIELD INCLUDE:



Commodore Sam Shattock, Head, Royal Fleet Auxiliary, Royal Navy



Dr Tine Larsen, Senior Seismologist, Geological Survey of Denmark and Greenland



Carine van Bentum,
Director,
SeaSEC



Elizabeth Heathfield,
Chief Corporate
Affairs and
Communications Officer,
Financial Services
Information Sharing
and Analysis Center

"LIKE OTHER ASPECTS OF MARITIME SECURITY, SECURING CRITICAL UNDERSEA INFRASTRUCTURE GOES BEYOND POSTURING TO DETER FUTURE AGGRESSION; IT INCLUDES ROBUST COORDINATION, TO ACTIVELY MONITOR AND COUNTER MALIGN OR HYBRID THREATS."

Vice Admiral Mike Utley, Commander, NATO MARCOM

# WELCOME

Dear Colleague,

I am delighted to announce the launch of Defence iQ's Seabed Security conference, in association with REPMUS 25. The importance of Critical Infrastructure Protection (CIP) for economic stability, public safety, national security and its global impact, is far reaching. As activity on the seabed continues to rise, it is increasingly important for stakeholders to come together to foster cooperation and develop new strategies to protect critical undersea infrastructure.

Recent interference with undersea cables has highlighted the need for both advanced capabilities to enhance operations in this contested environment, and the need for open discussions between military and civilian organisations.

The first day at Seabed Security will discuss the current challenges faced by stakeholders from across several industries to examine the global threat context faced by those operating in the underwater space, and will encourage cross-sector collaboration. Discussions will span uncrewed vehicles, advanced sensors, and data systems, addressing the latest developments and initiatives that can support operations.

During the second day, the focus is on the strategies and technologies that can be utilised to monitor and protect seabed infrastructure, including cutting-edge research into new capabilities to assist with operations. As new technologies emerge, stakeholders must be prepared to take advantage of them in order to face the challenges of an increasingly contested seabed.

Collaboration will drive innovation, and this conference presents multiple opportunities for attendees to discuss, question, and overcome the challenges faced by navies, government, security agencies, maritime organisations, academia, and industry as they look to secure critical undersea infrastructure.

Seabed Security 2025 provides a unique platform to engage with experts working within the underwater battlespace, allowing the audience to take part in conversations, create new partnerships, and share knowledge that will drive progress and protect essential infrastructure.

I look forward to welcoming you to Tróia in September.

Kind regards,



Anisa Cousin
Divisional Director
Defence iQ

Ani louis

# SEABED SECURITY



Rear Admiral (Ret'd) Eric Lavault, Former Head of Seabed Control, French Navy

## CONFERENCE CHAIRMAN

Entered the Naval Academy in 1990, and specializing in mine clearance diving, Rear Admiral Eric Lavault served 34 years in the French Navy.

He commanded 4 operational units: the Mine Clearance Diving Group in Toulon (2003-2005), the mine-clearing diver base ship "Pluton" (2003 - 2005), the tanker "La Somme" (2010 - 2011) and finally the amphibious helicopter carrier "Dixmude" (2015 - 2017).

He served as aide-de-camp to the French President from 2012 to 2015. He was Director of Navy Communications and spokesman for the Chief of Naval Staff from 2019 to 2022.

From 2022 to 2024, before leaving active service, Rear Admiral Eric Lavault headed the French Navy's Seabed Control Department.

He was in charge of the three groups of mine clearance divers based in Cherbourg, Brest and Toulon, and the 4 base ships for mine clearance divers (Pluton, Styx, Vulcain and Achéron).

He supervised the ramp-up of the Mine Countermeasures Flotilla, equipped with mine warfare drones (USV and UUV) identical to those used by the Royal Navy.

Finally, he accompanied and guided the equipping of the Navy with deep-sea UAVs and ROVs, aimed at giving the Navy a capability to intervene at a depth of 6,000m, within the Diving and Deep Sea Intervention Department named CEPHISMER (Centre expert plongée humaine et intervention sous la mer).

# 2025 SPEAKERS INCLUDE

# SEABED SECURITY



Commodore Sam Shattock, Head, Royal Fleet Auxiliary, Royal Navy



Captain
António Mourinha,
Innovation Adviser to the
Chief of Navy,
Portuguese Navy



Captain
Nuno Palmeiro Ribeiro,
Director, CEOM,
Portuguese Navy



Konstantin Bellini,
Director, Security and
Defence,
European Centre
of Excellence for
Countering Hybrid
Threats



Elizabeth Heathfield,
Chief Corporate
Affairs and
Communications Officer,
Financial Services
Information Sharing and
Analysis Center



Dr Camino Kavanagh, Visiting Senior Fellow, King's College London



Dr Tine Larsen, Senior Seismologist, Geological Survey of Denmark and Greenland



Carine van Bentum,
Director,
SeaSEC



Henri van Soest, Senior Analyst, RAND Europe



Senior Representative, Maritime Security Centre of Excellence, NATO

### **ATTEND SEABED SECURITY 2025 TO:**

- Discover the observations and outputs from REPMUS 2025 as participants from the exercise provide data-driven examples, and join a site tour of Portugal's Naval Operational Experimentation Center (CEOM) to explore its facilities and capabilities
- Understand the current threat picture for underwater activities through case-studies and programme updates that extend to strategies, technology, and operational perspectives
- Forge connections with stakeholders from across the underwater environment and gain knowledge from multiple sectors, including defence, telecommunications, banking, and finance
- Meet innovative solution providers working on seabed and uncrewed capabilities to learn about the latest developments for the protection of key infrastructure

# **CONFERENCE DAY ONE, 30 SEPTEMBER**

# AVIGATING UNDERSEA CHALLENGES

The first day of the conference will address the current challenges faced by stakeholders involved in the protection of critical undersea infrastructure from across several industries. Briefs will examine existing threats in the underwater space and on the seabed, including deep-sea mining and incidents of sabotage against undersea cables. Day one of the conference aims to boost international collaboration across several sectors, and encourage private-public partnerships, enabling a multi-faceted approach to how stakeholders can balance the need for resilience, deterrence, and security.

**REGISTRATION AND REFRESHMENTS** 0800

0850 **DEFENCE IQ WELCOME** 

Anisa Cousin, Divisional Director, Defence iQ

Defence iQ



#### **CHAIRMAN'S OPENING REMARKS**

Rear Admiral (Ret'd) Eric Lavault, Former Head of Seabed Control, French Navy

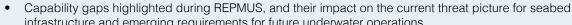
#### STRATEGIC OVERVIEW OF UNDERSEA OPERATIONS

The opening session will cover the strategic importance and operational considerations for undersea operations, highlighting advancements in doctrine and strategy. With the increasing size of infrastructure networks on the seafloor and the dependence on the networks for society, there is growing concern for the protection of critical undersea infrastructure. Methods to detect, anticipate, and respond to potential threats before they occur must evolve, along with new strategies involved in protecting and surveying the seabed.

0900

#### KEYNOTE ADDRESS: GLOBAL CONTEXT FOR UNDERWATER OPERATIONS

- Key regions of high seabed activity, and their potential for threats and the use of MUS capabilities for
- Progress in the integration of new technologies into seabed operations as observed through experimentation during REPMUS



infrastructure and emerging requirements for future underwater operations

Captain Nuno Ribeiro, Director, CEOM, Portuguese Navy

#### PANEL DISCUSSION: OBSERVATIONS FROM THE LARGEST ROBOTIC EXPERIMENTAION AND PROTOTYPING NAVAL EXCERCISE USING MARITIME UNCREWED SYSTEMS AND OTHER RECENT **EXERCISES**



- How can we utilise multi-domain capabilities to improve data sharing and decision making?
- Do we need to redevelop new doctrine and strategies, based on outputs from recent observations? Panellists include:

Henri van Soest, Senior Analyst, RAND Europe

1015

RAND

#### **MORNING COFFEE AND NETWORKING**

#### WIDER CONTEXT FOR SEABED SECURITY

Stakeholders must consider the broader implications of seabed security, including its impact on each sector and civilian activity, so this session will explore its critical role across various areas. By assessing the vulnerabilities of infrastructure and fully understanding the challenges faced by those operating cables, pipelines, and underwater power grids, the collective knowledge from multiple sectors can be used to discuss innovative solutions for the protection of this critical undersea infrastructure.

1100

#### **CURRENT CONTEXT FOR CRITICAL UNDERSEA INFRASTRUCTURE**

- Addressing seabed security issues across multiple industries and sectors to provide a cohesive approach
- Challenges faced by those operating and protecting critical undersea infrastructure
- Building resilience for undersea infrastructure through collaboration with stakeholders

Dr Camino Kavanagh, Visiting Senior Fellow, King's College London

1130

#### SECURING THE SEABED THROUGH INTER-AGENCY COLLABORATION

- Latest observations from the CoE's exercises and research on critical undersea infrastructure
- The CoE's role in bringing together stakeholders from military, industry, and academia to deliver a coherent maritime security strategy
- Strategic approaches to protecting critical infrastructure as interest rises

Senior Representative, NATO Maritime Security Centre of Excellence



## **CONFERENCE DAY ONE, 30 SEPTEMBER**

## **NAVIGATING UNDERSEA CHALLENGES**

1200

#### **NETWORKING LUNCH**

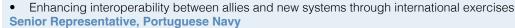
#### LEVERAGING INTERNATIONAL COOPERATION FOR INCREASED SECURITY

The task of protecting undersea infrastructure is made more complex due to the expansive network of cables and pipelines in vast and remote oceans, making it difficult to monitor and even harder to defend. No individual organisation can monitor and protect all seabed infrastructure, so collaboration with European and NATO allies will be essential to bolstering strategies to combat interference. Through the sharing of intelligence and capability development, stakeholders will increase their ability to detect threats and produce technology that can provide deterrence.

1330

#### **OVERVIEW: REPMUS 2025**

- Key data and outputs from the testing of underwater uncrewed vehicles
- Informing NATO doctrine and policy with REPMUS observations



1400

(0)

#### HYBRID THREAT IN THE CONTEXT OF SEABED SECURITY

- · Crafting a common understanding of hybrid threats and the strategies employed to counter them
- Combining knowledge from research into technology, doctrine, and cyber power to address hybrid threats
- The Centre's latest work in supporting nations as they define doctrine to combat hybrid threats
   Konstantin Bellini, Director, Security and Defence, European Centre of Excellence for Countering
   Hybrid Threats



1430

#### AFTERNOON TEA AND NETWORKING

1515 TRAVEL TO SITE VISIT (TRANSPORT PROVIDED)

1530 SITE VISIT TO THE PORTUGUESE NAVY'S NAVAL OPERATIONAL EXPERIMENTATION CENTER (CEOM)

All conference attendees are invited to visit the Portuguese Navy's Naval Operational Experimentation Center for a tour of the site, including the hangar, runway, and other experimentation facilities used during REPMUS 2025. Hear a brief from the Director of CEOM to discuss the work carried out by the centre and the opportunities to get involved with new research. Understand the current priorities for the Portuguese Navy's development and testing of innovative maritime capabilities.



1630

#### RETURN TRANSPORT TO CONFERENCE VENUE AND END OF DAY ONE



# CONFERENCE DAY TWO, 1 OCTOBER LEVERAGING INNOVATION FOR SEABED OPERATION

Day two of the conference will focus on the strategies and technologies that can be used for improving knowledge of the seabed through underwater exploration, better monitoring of the underwater domain, and enhanced protection of seabed infrastructure by securing the ability to act underwater. This includes cutting-edge research into new capabilities to assist with operations. As new technologies emerge, stakeholders must be prepared to take advantage of them in order to face the challenges of an increasingly contested and vulnerable seabed.

0830

#### REGISTRATION AND REFRESHMENTS

0925

#### **CHAIRMAN'S OPENING REMARKS**

Rear Admiral (Ret'd) Eric Lavault, Former Head of Seabed Control, French Navy

#### **INTEGRATING NEW CAPABILITIES INTO UNDERSEA OPERATIONS**

As new and improved deep-water capabilities emerge, security partners, the subsea cable industry, international bodies, government, and NATO's navies must also develop the necessary cohesive strategy for the adoption and integration of such technologies into their operations. Autonomous and uncrewed systems, sensing equipment, and surface vessels must cooperate fully in order to carry out effective and efficient operations.

0930

#### **RFA PROTEUS IN ROYAL NAVY OPERATIONS**

- RFA Proteus' role in the fleet and operations of the Royal Navy
- Expanding uncrewed capabilities for enhanced surveillance and survey operations
- Trialling new technologies to plan for increased seabed activity

Commodore Sam Shattock, Head, Royal Fleet Auxiliary, Royal Navy

1000

#### **MODERNISING THE PORTUGUESE NAVY**

- Current priorities for the Navy as uncrewed systems become increasingly vital to the maritime domain
- Advancements in underwater communications and uncrewed systems to improve maritime operations
- Working with allies to assess requirements and integrate new developments into operations at pace Captain Antonio Mourinha, Innovation Advisor to the Chief of the Navy, Portuguese Navy

1030

#### **MORNING COFFEE AND NETWORKING**

#### **ENHANCING SENSING AND MONITORING SYSTEMS**

As underwater activity increases, nations are looking to expand their capabilities to detect activity around critical infrastructure, with smarter and more scalable solutions that can augment military patrols. New technologies, including progress from areas beyond the defence industry, must be integrated into systems to ensure that all activity is identified and attributed efficiently, to detect risks early and prevent damage before it happens.

1115

#### LARGE SCALE SEISMOLOGICAL MONITORING OF SUBSEA ACTIVITIES USING EXISTING **INFRASTRUCTURE**



- Applying innovations in sensing to undersea cables to monitor damage and activity
- Working with military stakeholders to ensure protection of infrastructure and identification of incidents
- Dr Tine Larsen. Senior Seismologist. Geological Survey of Denmark and Greenland

1145

#### **EXPLOITING DATA AND UNCREWED SYSTEMS FOR MARITIME OPERATIONS**

- Research and development of uncrewed naval systems for data collection and infrastructure protection
- Utilising sonar data from underwater capabilities in maritime operations, including MCM and seabed
- Advancing technologies to support the integration of new systems into operations **Norwegian Navy (invited)**

1215

#### **NETWORKING LUNCH**

#### **DEVELOPING UNCREWED SYSTEMS FOR UNDERSEA OPERATIONS**

Uncrewed systems offer much potential to support seabed operations, including the protection, surveillance, and repair of critical infrastructure, however challenges remain with the number and capabilities of UUVs and creating greater autonomy of USVs. Their unique capabilities can reduce risks and improve operational efficiency, however stakeholders must also work to fully integrate them with existing capabilities to ensure success in underwater environments.

## **CONFERENCE DAY TWO, 1 OCTOBER**

## LEVERAGING INNOVATION FOR SEABED OPERATIONS

1330

#### TESTING UNDERWATER SYSTEMS FOR INCREASED INNOVATION AND SECURITY

- Recent projects from SeaSEC on testing capabilities for underwater operations
- Applications of new innovations for multiple sectors to ensure full coverage of vulnerabilities
- · Providing a realistic testing ground for the validation of maritime capabilities

Carine van Bentum, Director, SeaSEC

1400

#### **AUTONOMY WITHIN THE ROMANIAN NAVY**

- The future of Romania's naval operations as innovation is prioritised
- · Experimentation and testing of naval capabilities for the security of critical undersea infrastructure
- Integrating autonomy into naval operations as new capabilities emerge

**Romanian Navy (invited)** 

1430

#### AFTERNOON TEA AND NETWORKING

#### APPLYING THE LATEST TECHNOLOGIES ACROSS MULTIPLE SECTORS

Progress from all industries must be shared to ensure that all stakeholders can effectively protect their undersea infrastructure from threats. Many sectors are currently advancing their capabilities for the protection of undersea infrastructure, and the sharing of knowledge and advancements between sectors will allow greater efforts to be made to combat threats as intelligence can be shared to provide better responses.

1515

#### INTELLIGENCE SHARING TO PROTECT FINANCIAL INFRASTRUCTURE

- FS-ISAC's role in supporting the protection of undersea financial infrastructure through collaboration with members
- · Assessing long-term threats and current incidents to provide a global intelligence picture
- Sharing intelligence across the globe to devise actionable procedures and keep services running when facing threats

FS-ISAC

Elizabeth Heathfield, Chief Corporate Affairs and Communications Officer, Financial Services Information Sharing and Analysis Center (FS-ISAC)

1545

#### **CROSS-SECTOR INNOVATIONS FOR INFRASTRUCTURE PROTECTION**

- Working with colleagues in academia and industry to improve resilience of infrastructure
- Securing oil and gas infrastructure with other stakeholders to ensure continued supplies
- Discussing the applications of AI and robotics within the sector

1615



#### **CHAIRMAN'S CLOSING REMARKS**

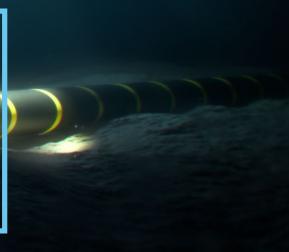
Rear Admiral (Ret'd) Eric Lavault, Former Head of Seabed Control, French Navy

1630

**END OF CONFERENCE** 

"THE EVENT PROVIDED AN INSIGHT INTO FUTURE STRATEGY AND CURRENT CHALLENGES FACED ACROSS NAVIES. THE ENGAGEMENT WITH THE SPEAKERS AND ATTENDEES HAS HELPED TO FURTHER INTRODUCE OUR CAPABILITY WITHIN THE MARITIME SECTOR."

Business Development Manager, Kx (Surface, Air, and Seabed Warfare 2024 attendee)







#### **Maximise Your Involvement: Sponsorship and Exhibition Opportunities**

Invest in making an impact with the people that matter to your business

Sponsorship is the most effective solution to share your company's ideas to senior military and professionals from across the underwater community, who are searching for actionable solutions to their current operational challenges.

**Seabed Security** will be attended by senior officials and decision-makers from across the maritime industry, bringing together buyers and suppliers in one location. With tailored networking, sponsors can achieve the face-to-face contact that overcrowded trade shows cannot deliver.

Exhibiting and Sponsorship options are extensive, and packages can be tailor-made to suit your individual company's needs.

#### Features of Sponsorship include:

- Prominent exhibition space in the main conference networking area
- Thought leadership speaking opportunities
- · Participation in comprehensive pre-event marketing campaigns
- · Tailored networking solutions

For more information and to discuss the right opportunity, contact us on +44 (0)207 368 9300 or partner@defenceiq.com

#### WHO TYPICALLY ATTENDS:





















#### **MEDIA PARTNERS**

















## Defence iQ

ABOUT DEFENCE IQ

Established in 2001, Defence iQ has grown to become one of the world's largest defence events and media organisations. We are uniquely positioned to engage with and support the international defence community via our digital platform and global conferences, all of which are underpinned by rigorous research into global defence policy, acquisition strategy, capability development and military leadership.



30 September – 1 October 2025 Tróia, Portugal

### PRICING AND REGISTRATION INFORMATION

### **PASS INCLUDES:**

**CONFERENCE DAYS** (30 SEPTEMBER - 1 OCTOBER, 2025)

ACCESS TO PRESENTATIONS POST EVENT

Military/Government**	
EARLY BIRD OFFER 1	SAVE €300
Register and Pay by 27 June 2025	€399 +VAT
EARLY BIRD OFFER 2	SAVE €200
Register and Pay by 25 July 2025	€499 +VAT
EARLY BIRD OFFER 3	SAVE €100
Register and Pay by 29 August 2025	€599 +VAT
Standard Price	€699 +VAT

SME Rate - Limited Places Available ***	
EARLY BIRD OFFER 1	SAVE €300
Register and Pay by 27 June 2025	€499 +VAT
EARLY BIRD OFFER 2	SAVE €200
Register and Pay by 25 July 2025	€599 +VAT
EARLY BIRD OFFER 3	SAVE €100
Register and Pay by 29 August 2025	€699 +VAT
Standard Price	€799 +VAT

Industry	
EARLY BIRD OFFER 1	SAVE €600
Register and Pay by 27 June 2025	€1,599 +VAT
EARLY BIRD OFFER 2	SAVE €400
Register and Pay by 25 July 2025	€1,799 +VAT
EARLY BIRD OFFER 3	SAVE €200
Register and Pay by 29 August 2025	€1,999 +VAT
Standard Price	€2,199 +VAT

### **BOOK ONLINE**

CONFERENCE CODE: 51023.001

- To qualify for early booking discounts, payment must be received by the early booking deadline
- \*\*Military and government discounted rates apply to serving military officers, government, and university personnel only. Contractors and ex military are not eligible
- \*\*\*An SME is defined as a business with fewer than 250 employees and a turnover of less than or equal to €50 million or a balance sheet total of less than or equal to €43 million. Business units of multinational corporations do not qualify.





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#### ACCOMMODATION AND VENUE

TRÓIA, PORTUGAL. FOR UPDATES ON THE VENUE AND ACCOMMODATION INFORMATION, PLEASE VISIT:

HTTPS://WWW.DEFENCEIQ.COM/EVENTS-SEABED-SECURITY/VENUE

TRAVEL AND ACCOMMODATION ARE NOT INCLUDED IN THE REGISTRATION FEE.

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- 5 OR MORE RECEIVE A 15% DISCOUNT.
- 7 RECEIVE A 20% DISCOUNT.

ONLY ONE DISCOUNT AVAILABLE PER PERSON. TEAM DISCOUNTS ARE NOT APPLICABLE IN CONJUNCTION WITH ANOTHER DISCOUNT.

## "THOUGHT PROVOKING AND EDUCATIONAL"

Royal Navy (Surface, Air, & Seabed Warfare 2024)