

## PROGRAMME: COOPERATIVE ANTISUBMARINE WARFARE

### MISSION IN BRIEF

Transform NATO's antisubmarine warfare (ASW) strategy from a reliance on using conventional assets to achieving ASW dominance through affordable intelligent autonomous ASW networks.

### OVERVIEW

Since its inception in 1959, CMRE has been a world-class Centre for sonar research, particularly multi-static active sonar. Although sonar research is still a major thrust at the Centre, today the emphasis is on integrating conventional assets with heterogeneous networks of smart sensors to conduct several types of ASW missions as force multipliers.

The Programme is organized into two main projects.

The **Maritime Unmanned Systems (MUS) for ASW project** with a thrusts into the following areas:

- Advanced cooperative autonomy for ASW through Hybrid networks with platforms fielding both active and passive sensors
- Low-power, long-endurance platforms
- Belief propagation algorithms development for scalable simultaneous tracking of multiple targets for active and passive sonar
- Sensorization of the Centre's OEX-C with the recently constructed SLICTA triplet array
- Embedded real-time environmental services on board the OEX -C to inform robotic ASW decision support

**The Decision Support (DS) project** seeks to enhance both the scientific understanding and operational/ tactical employment of Maritime Unmanned Systems (MUS) for ASW through Operational Research studies and support to experimentation. The goal is providing support to the Nations that begin to investigate such systems, with a full understanding of the performance space over which multiple vehicle configurations may be optimized, providing guidance as to which MUS capabilities offer the most promise in terms of efficiency and effectiveness over the different ASW mission areas.

### CONTACT

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