



## PORT PROTECTION

### MISSION IN BRIEF

To increase NATO's ability to protect maritime forces, shipments, and assets against unconventional threats, including terrorism, in ports and harbours.

### OVERVIEW

One challenge that NATO faces is the vulnerability of its military forces and critical infrastructure to terrorist attacks from the waterside in ports and harbours. An open waterside exposes NATO ships and port facilities to attacks by small boats or underwater intruders. In security operations, outside of combat, response measures may include warning, proving hostile intent, and responding with a force that matches the threat, perhaps using non-lethal weapons.

Researchers at the Centre are advancing port protection from a variety of angles. First, high-readiness technologies have been analyzed for their suitability in delivering unambiguous warnings, determining proof of hostile intent of persons in small boats or underwater in security exclusion zones, and then incapacitating non-compliant intruders. Technologies include hailing devices, dazzlers, entanglement systems, underwater air guns and more.

CMRE is developing a system concept for early contact and warning above and below the water in ports. Mission responsibilities are divided optimally between security providers and autonomous systems, capitalizing on the strengths of each. Goals include affordability, scalability and use of open architecture for ease of integration into existing systems and for interoperability among NATO nations. The Talon 12 exercise for countering small boats, held May 2012, was the most recent exercise to test this innovative concept.

CMRE is also engaging military and civilian security providers early in the concept development cycle in this new area of research by hosting conferences, offering courses and hosting virtual red-on-blue gaming exercises on CMRE's *OpenSea* Tactical Theatre Simulator. *OpenSea* lets port operators, security experts, and researchers experiment safely and cost-effectively with end-to-end capability, exercising everything from initial detection to response to situation resolution in high-risk maritime security scenarios.

### CONTACT

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*Top: A small boat entering a port can pose a real threat. Middle: For the Talon 12 exercise, sensors and warning devices were mounted on a platform, which was controlled by automated software. Bottom: A simulation, using OpenSea, of a high-speed boat being intercepted by an unmanned surface vehicle.*