



Blue Shield
Strengthening European
Maritime Security

FACT SHEET #3

NATO BEST PRACTICES IN ENHANCING EUROPE'S MARITIME SECURITY

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NATO BEST PRACTICES IN ENHANCING EUROPE'S MARITIME SECURITY

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I. EXECUTIVE SUMMARY

Best practices matter for NATO in maritime security because they ensure member nations operate under shared standards and procedures at sea. This improves coordination in multinational operations, reduces miscommunication, and enables faster responses to threats such as piracy, terrorism, and illegal trafficking. They also strengthen cooperation with NATO partners and support the safe integration of emerging technologies like autonomous systems, advanced surveillance, and cyber capabilities. For Portugal and the Atlantic, NATO best practices are especially important in enhancing Europe's maritime security by protecting critical Atlantic sea lanes, strengthening surveillance and defence cooperation, and reinforcing Portugal's strategic role as a gateway between Europe, the Atlantic, and other global maritime routes. By promoting safety, interoperability, and collective defence, NATO best practices help the alliance remain resilient and effective against evolving maritime challenges.

II. NATO BEST PRACTICES AT SEA

II.1 REPMUS 25 & Exercise Dynamic Messenger

Exercise Dynamic Messenger is an operational experimentation exercise operating through NATO and in cooperation with Robotic Experimentation and Prototyping with Maritime Unmanned Systems (REPMUS).

Actors

- NATO (hosted by the Portuguese Navy and joined by the European Defence Agency).
- Academic institutions-
- Industry (such as Rheinmetall)

Location

Troia and Sesimbra, Portugal

Objectives

- Experimentation, evaluation and integration of new maritime capabilities
- Strengthen interoperability
- Improve maritime situational awareness and deployment of reliable technologies

Function

Ships and unmanned surface vessels conduct manoeuvres, live fire drills, and counter-UXV training to assess interoperability and effectiveness

Results: Effective multi-national cooperation, operational realism and technological innovations, allowing NATO to identify capability gaps, refine procedures and respond effectively to emerging maritime threats.

II.2 The Federated Mission Networking Initiative (FMN)

FMN is a NATO capability designed to improve command, control and decision-making in operations by enabling better information-sharing between allied and partner countries.

Objectives

- Interoperability
- Flexible and scalable communication systems
- Allow access to consistent, reliable data across national systems

Function

Structured approach built on three elements:

- Governance
- Common frameworks
- Mission-specific networks

Continuously refined through exercises, modelling and simulation, and collaboration between operators, developers, and decision-makers

Results: FMN demonstrates standardisation, cooperation and real-time data sharing initiatives. With the support of other Centres, such as the Maritime Geospatial, Meteorological and Oceanographic Centre of Excellence (MGEOMETOC-COE), headquartered in Lisbon, in enhancing environmental awareness and decision-making by integrating geospatial, meteorological, and oceanographic data for all allies.

II.3 Operation Sea Guardian

Operation Sea Guardian was launched in 2016 as the successor to Operation Active Endeavour and is NATO's primary security operation in the Mediterranean Sea.

Actors

- NATO
- Cooperation with partners: Morocco and Algeria

Function

- Combines continuous monitoring with targeted patrols
- Contributions from allies and partners
- Deploying assets – ships, maritime patrol aircraft, UAVs, and airborne early warning systems

Objectives

- Maritime situational awareness
- Deterrence
- Counter terrorism

- Capacity building
- Interoperability

- Coordination by NATO's Allied Maritime Command in Northwood

Results: Operation Sea Guardian demonstrates a best practice because it shows effective multinational coordination, interoperability, and adaptability, combining diverse capabilities under a unified framework to enhance maritime security.

Results of [Operation Sea Guardian](#) in 2025:

- 5495 Ships investigated
- 1224 Ships interrogated
- 5 Port visits and passing exercises with NATO partner nations.

II.4 [Operation Baltic Sentry](#)

Baltic Sentry is a NATO-led multi-domain operation launched in early 2025, focusing on security in the Baltic Sea region. The operation came as a response to the rise in sabotage against critical undersea infrastructure.

Actors

- NATO Allies
- NATO Maritime Centre for Security of Critical Underwater Infrastructure (NMCSCUI)
- Industry

Function

Combines NATO's maritime assets, national surveillance capabilities, and emerging technologies into a coordinated system for protecting critical undersea infrastructure

Objectives

- Protection of critical infrastructure
- Monitoring maritime activity
- Resilience against sabotage
- Increasing NATO's regional presence.

Results: Baltic Sentry represents an effective NATO operation because it shows NATO's direct response to emerging threats to its members and demonstrates multinational coordination and interoperability. Additionally, it is further enhanced by the announcement of [Eastern Sentry](#) later in 2025, combining its maritime aspect with the air domain.

III. CONCLUSION

Together, these initiatives demonstrate how NATO uses best practices to turn cooperation, technology, and strategy into real operational advantage in maritime security. Exercises like Dynamic Messenger show how innovation and emerging technologies can be safely integrated, while FMN improves information sharing and decision-making between allies and partners. Operations such as Sea Guardian and Baltic Sentry show the importance of multinational coordination and adaptability in responding to evolving threats. For Portugal and the Atlantic, these practices help protect key sea lanes, strengthen maritime surveillance, and reinforce Portugal's strategic role in transatlantic security, especially through its leading role in Exercise Dynamic Messenger. Overall, these best practices enhance interoperability, situational awareness, resilience, and NATO's ability to protect the alliance and maintain security in the maritime domain.

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