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JOINT STAFF WORKING DOCUMENT

Report on the implementation of the revised EU Maritime Security Strategy Action Plan

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Contents

1. INTRODUCTION

The security of seas and oceans is a clear priority for the European Union and its Member States. It is a prerequisite for all types of maritime activities, including sea-borne trade, which contributes to the economic and social welfare of the European citizens. It also facilitates the implementation of measures to safeguard the marine environment. The EU therefore has a strategic interest in identifying and addressing risks and threats to maritime security – both within and beyond the EU's maritime areas – particularly those deriving from unlawful acts and activities at sea and affecting ships, ports and other critical maritime infrastructure.

Security risks and threats in the maritime domain have become more complex and intrinsically linked at the global level. In the European neighbourhood areas, there have been significant increases in irregular migration flows and human trafficking and smuggling, particularly through the Mediterranean Sea, which has come on top of other illegal activities, such as drugs and arms trafficking and illegal, unreported and unregulated (IUU) fishing. These issues led the Council to adopt in 2014 the EU maritime-security strategy (EUMSS) and an action plan supporting its implementation. The strategy aims to improve the way the EU pre-empts and responds to security challenges affecting people, activities, infrastructure and the environment in the maritime domain. Through closer collaboration between maritime authorities at national, regional and EU levels, the strategy seeks to increase both situational awareness and operational efficiency.

The EUMSS and its action plan seek to protect the EU's global maritime interests and promote the EU as a strong contributor to global maritime security. They strengthen the link between internal and external security, and combine European security with international maritime governance. Through closer cooperation and forward planning, the EU and its Member States can make better use of existing resources and enter into more effective and credible international partnerships.

The EUMSS is based on the following four principles, which are also reflected in its action plan:

- a cross-sectoral approach (including civil-civil, civil-military and military-military cooperation);
- functional integrity;
- respect for rules and principles (including the rules and principles set out in international law and the United Nations Convention on the Law of the Sea (UNCLOS);
- maritime multilateralism (including the EU's decision-making autonomy).

The action plan is a rolling plan, subject to regular assessment of progress and review. The European Commission and the High Representative, who also acts as Head of the European Defence Agency (EDA), are jointly responsible for monitoring its implementation. They regularly issue implementation reports based on contributions from the Member States.

Following two implementation reports, the Council adopted a revised EUMSS action plan and accompanying Council conclusions on 26 June 2018[1]. The aim was to ensure that the EU's policy response remains: (i) fit for current and future challenges; (ii) in line with evolving

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[1] https://ec.europa.eu/maritimeaffairs/sites/maritimeaffairs/files/2018-06-26-eumss-revised-action-plan_en.pdf

political priorities; and (iii) consistent with ongoing work and legislation in the area of security and defence.

The revised action plan has a 'horizontal' part (A) covering five key cross-cutting issues[2]. It also has a new regional part (B), which seeks to use regional responses to address global challenges in key maritime hotspots, both at home (European sea basins like the Mediterranean and the Black Sea) and internationally (Gulf of Guinea, Horn of Africa/Gulf of Aden, Red Sea or southeast Asia). It thus brings together both the internal and external aspects of the EU's maritime security.

The actions set out in the action plan contribute to the implementation of: (i) the EU global strategy[3]; (ii) the renewed EU internal security strategy 2015-2020[4]; (iii) the Council conclusions on global maritime security[5]; and (iv) the Joint communication on international ocean governance[6]. The implementation of the action plan has also started to benefit from several EU defence initiatives, notably the coordinated annual review on defence (CARD); the permanent structured cooperation (PESCO); the European Defence Fund (and its precursor programmes); and EU-NATO cooperation. The EU Capability Development Priorities provide a key reference for these initiatives.

This report, the first since the 2018 revision of the EUMSS action plan, provides a non-exhaustive overview of ongoing activities at EU and national level to support the EU's internal and external maritime security. It covers the reporting period from July 2018 to December 2019. The objective of this third implementation report is to: (i) take stock of the implementation process at national and EU level and draw relevant conclusions; (ii) suggest ways to improve the reporting process; and (iii) provide a clearer picture of the EU's coordinated approach to maritime security.

In total, 11 national reports were received from Member States to inform this overall report. Those national reports were combined with substantive reporting by the Commission, the European External Action Service (EEAS), the EDA, the European Border and Coast Guard Agency (Frontex), and the European Fisheries Control Agency (EFCA). The overall report is structured into a thematic assessment of the progress made in implementing part A of the action plan. For each of the five crosscutting issues, the themes correspond to the main inputs emerging from the national reports. The assessment for part B of the action plan - a novelty in this report - focuses on the main achievements in each geographical sea area.

In contrast to previous implementation reports, this report distinctly assesses progress in terms of civil-military cooperation across sectors and borders. It also analyses cooperation on coast guard functions (CGF), a key driver for coordination and collaboration on maritime security across the EU.

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[2] International cooperation; maritime awareness; capability development; research and innovation; risk awareness and management; and education and training.
[3] Global Strategy for the European Union's Foreign and Security Policy of 28 June 2016 (http://eeas.europa.eu/archives/docs/top_stories/pdf/eugs_review_web.pdf)
[4] http://data.consilium.europa.eu/doc/document/ST-9798-2015-INIT/en/pdf
[5] Council conclusions on global maritime security of 19 June 2017 https://www.consilium.europa.eu/media/24000/st10238en17-conclusions-on-global-maritime-security.pdf
[6] Joint communication JOIN(2016) 49 final on 'International ocean governance: an agenda for the future of our oceans' of 10 November 2016.

As another novelty, this report identifies how the actions reported in the national and EU bodies' reports connect and contribute to the implementation of the EU's strategic agenda[7]. This assessment is based only on the reported inputs and presents a tentative and non-exhaustive interpretation.

2. PART A - HORIZONTAL ACTIONS

2.1 INTERNATIONAL COOPERATION

Reporting entities (countries and EU bodies):

- EU Member States: IT, BE, MT, HR, ES, FI, PT, RO, LT, FR, PL.
- EU institutions, bodies and agencies: Commission, EEAS, Frontex, EFCA and EDA.

Achievements and progress (by theme) emerging from reports across all actions:

A. Member States and EU institutions and agencies **have actively promoted the consolidation of maritime security at international level.**

The EU has maintained regular cooperation with global actors in maritime security. The main synergies with the UN system have been in the fight against maritime crime, terrorism and piracy/armed robbery at sea (ARAS). Synergies have been particularly strong between EU bodies (Commission, EEAS) and key players such as the Global Maritime Crime Programme of the UN Office on Drugs and Crime (UNODC) and the International Maritime Organisation (IMO). MS have also kept maritime security high on the agenda of different international fora such as NATO, the IMO, Europol and Interpol. They have also kept maritime security high on the agenda in bilateral dialogues (e.g. with Russia).

EU institutions have continued to promote maritime security in the context of international ocean governance. They have also continued to support joint calls for action on international ocean governance in various multilateral fora (G7, G20, conferences of the parties on climate and biodiversity). The EU supports maritime security as one of the focal topics in the "Our Ocean" conference process. In 2019, the EU announced new commitments worth EUR 34.5 m on maritime security at the "Our Ocean" conference organised in Oslo. During the 2018 "Our Ocean" conference, the EEAS and the Seychelles organised a talk on "*jointly promoting maritime security and sharing lessons learned on international cooperation at sea*". The presentations made by the EU during this talk built in particular on the services provided through the Copernicus maritime-surveillance service in support of international cooperation activities to counter criminal activities at sea in the Gulf of Guinea) and to support search and rescue (SAR) operations in the Indian Ocean (Commission, EEAS).

EU institutions and agencies supported the mainstreaming of maritime security in the annual events of the European and Mediterranean fora on cooperation in Coast Guard Function (Commission, EEAS, EFCA, Frontex). At the 24th International Border Police Conference,

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[7] EU Strategic Agenda (2019–24) https://www.consilium.europa.eu/en/eu-strategic-agenda-2019-2024

hosted by Frontex in October 2019, Coast Guard Function (CGF) was discussed for the first time and represented by EU and non-EU stakeholders.

The EU institutions (Commission, EEAS) have continued to mainstream maritime security in their dialogues with strategic partners such as the US[8], India, Japan, Indonesia, the Philippines and Singapore, all members of the ASEAN Regional Forum. Maritime security is also among the topics covered by the Ocean Partnership signed by the Commission with Canada in 2019, which aims to provide for 'the exchange of best practices on coast guard functions where appropriate, including within the North Atlantic Coast Guard Forum'.

MS also engaged in regional cooperation frameworks, such as the Indian Ocean Rim Association (IT). The Commission, interested MS (FR, BE), and other EU institutions and bodies (EEAS, EFCA) have actively participated in the annual meetings of the G7++ Friends of the Gulf of Guinea (G7++FoGG). MS also engaged in dialogues on maritime security with countries in South America (ES).

EU institutions (Commission, EEAS) helped and encouraged non-EU countries to sign, ratify and implement relevant international instruments such as UNCLOS and its implementing agreements in the context of the United Nations General Assembly's (UNGA) resolutions (particularly the resolutions on Oceans and the Law of the Sea), as well as in political dialogues with partners such as China and southeast Asian countries. The EU reported on its external action on maritime security through cooperation programmes designed to help non-EU countries to implement IMO regulations on port security and safety of navigation. The EU and MS have also actively coordinated and contributed to the 2018 amendment of the ILO's Maritime Labour Convention, 2006 (MLC)[9] concerning minimum standards during a period when the seafarer is held captive in case of piracy, armed robbery and kidnapping. The 2018 amendment has been formally accepted by the vast majority of MS and will enter into force on 26 December 2020. EU social partners are working on an agreement to transpose relevant parts of the amendments into EU law through amending Directive 2009/13.

In addition, the Commission and EEAS continued to carry out formal and informal dialogues on IUU fishing with a number of non-EU coastal countries and flag states as well as dialogues on labour rights, including forced labour and child labour in fishing and maritime transport. MS reported on their involvement in initiatives with non-EU countries on sharing best practices and lessons learned on UNCLOS. Other Member States reported on their support, including financial support, to encourage peaceful settlement of international maritime disputes (FI, PT).

In their national summaries, nearly all MS reported implementing maritime-security-related instruments, in particular the IMO's International Ship and Port Facility Security (ISPS) Code (through Regulation (EC) No 725/2004 and Directive 2005/65/EC) and the Conventions on the Suppression of Unlawful Acts against the Safety of Maritime Navigation (SUA). As part of its full compliance with the ISPS Code, the Commission continued to ensure, mainly through the Commission's maritime-security inspections system, that ships, ports and port

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[8] Through a Memorandum of Understanding with the US Coast Guard signed with the Commission (DG MOVE).
[9] https://www.ilo.org/wcmsp5/groups/public/---ed_norm/---normes/documents/meetingdocument/wcms_627161.pdf

facilities (port terminals) are properly secured and protected according to international and EU legislation on maritime security. In 2019, 96 maritime-security inspections have been carried out, covering national administrations, ports, port facilities, and ships.

B. Sustained efforts to **promote linkages between maritime security and development policy** clearly emerge from the reports.

Through strengthened partnerships with non-EU countries and/or regional organisations, EU bodies and MS have continued to support the development of maritime-security capacities in non-EU countries. The reports, in particular national summaries from MS, show a wide array of initiatives addressing maritime awareness, implementation of international regulations on maritime security, and law enforcement activities.

The EU bodies reported on capacity-building initiatives targeting maritime security, in particular in western and central and North Africa, eastern and southern Africa, and the wider Indian Ocean region. As such, EU's Copernicus programme significantly contributed to international SAR operations and to capacity building in these areas, also in cooperation with the UN.

In North Africa, the EU is funding a regional action to support, in cooperation with a Member State, Morocco's and Tunisia's respective maritime border surveillance and control capacities. In Western and Central Africa, the EU continued its active involvement, along with several MS, in particular in the Gulf of Guinea (where piracy/ARAS incidents with kidnapping of crews continued to rise) through various regional programmes and initiatives, such as the WeCAPS[10], Support to West Africa Integrated Maritime Security (SWAIMS)[11] and PASSMAR programmes[12]. The Commission and EFCA are also funding the PESCAO programme[13] to improve fisheries governance and food security in west Africa. The Commission (DG MARE, DG DEVCO) and EEAS are also involved in the Gulf of Guinea Inter-Regional Network (GoGIN) project[14]. GoGIN was launched in 2016 and has supported the establishment of a regional information-sharing network in the Gulf of Guinea in close coordination with other programmes. MS, the Commission and the EEAS have also been actively involved in improving maritime security in the Gulf of Guinea region through bilateral and multilateral dialogues, including within the EU's Maritime Security Regulatory Committee (MARSEC), defence cooperation programmes and/or regular, joint naval operations with coastal partner countries (FR, PT, IT, BE).

In eastern Africa, southern Africa and the Indian Ocean, the EU has continued to support and fund the CRIMARIO[15] and MASE programmes[16] to help participant countries develop and

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[10] Improving port security in West and Central Africa (https://criticalmaritimeroutes.eu/projects/wecaps/).
[11] Strengthening Criminal Justice Systems in West and Central Africa
(https://www.unodc.org/brussels/en/swaims.html).
[12] Support Programme to the Maritime Security Strategy in Central Africa. Some PASSMAR programmes began in 2019 (https://www.unodc.org/brussels/passmar.html).
[13] Improved regional fisheries governance in western Africa (https://www.efca.europa.eu/en/content/pescao).
[14] https://criticalmaritimeroutes.eu/projects/gogin/
[15] Critical Maritime Routes Indian Ocean (https://www.crimario.eu/en).
[16] Regional Programme for Promotion of Maritime Security in the Eastern and Southern African and Indian Ocean (https://www.commissionoceanindien.org/portfolio-items/mase/).

improve a regional architecture for maritime-information sharing. In addition to these programmes, other EU actions have been set up to improve or develop regional capacities to fight maritime crime, namely: (i) the Port Security and Safety of Navigation in eastern and southern Africa and the Indian Ocean programme; and (ii) the Regional Programme for Maritime Security in the Red Sea. EUCAP Somalia continued to support the development of Somali maritime-security capacities, highlighting results such as: (i) the ability of the Somaliland Coast Guard and the Mogadishu Maritime Police Unit to carry out limited patrols and perform basic SAR operations; and (ii) the development of Somaliland Coast Guard Law.

EU institutions, agencies and MS reported their involvement in initiatives such as:

- the EU Border Assistance Mission in Libya (EUBAM Libya);
- the WestMED Strategy, aimed at building bridges between southern Europe (IT, ES, FR, MT) and north Africa to strengthen relations with partner countries (Libya, Morocco, Tunisia) on maritime affairs through development and maritime capacity-building activities;
- MEDEA, a project to develop a regional network of practitioners and other security-related players in the Mediterranean and the Black Sea;
- the continuation of the SeaPort Cooperation (SEACOP) project[17], running since 2015, to support the fight against maritime illicit trafficking and associated criminal networks in Africa, Latin America and the Caribbean.

Moreover, through their national bilateral cooperation activities (and in many cases in conjunction with their participation in CSDP missions operations and Frontex operations), MS (FI, PT, IT, FR, SP, MT): (i) provided training to non-EU countries; (ii) helped non-EU countries to develop maritime-surveillance capacities; (iii) led educational projects; and (iv) participated in seminars dedicated to improving awareness on maritime-security challenges, especially in West Africa and the Gulf of Guinea.

C. Reports highlighted the key role of operational activities carried out in cooperation with external partners to **prevent and disrupt maritime illicit activities.**

With the essential contribution of MS, operations led by EU agencies and CSDP missions/operations remained a key part of the EU's action to protect its strategic interests and improve maritime security, both on its external borders and globally.

The European Union Naval Force (EUNAVFOR) MED Operation Sophia continued to be an essential part of the EU's efforts to dismantle the business model of human-trafficking and smuggling networks in the Mediterranean. In 2018 and 2019, aerial assets continued to support the operation's core task by providing valuable data. Operation Sophia worked with an extensive network of organisations involved in the fight against smugglers and traffickers, which helped to improve situational awareness and ensure the complementarity of efforts between actors. Members of the Libyan coast guard and navy have continued to benefit from training courses organised by the operation, both at sea and in Member State facilities. MS (IT, HR) reported on their training activities and support for CGF carried out bilaterally with the Libyan authorities. Increased cooperation between EUNAVFOR MED Operation Sophia

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[17] https://www.fiiapp.org/en/proyectos_fiiapp/proyecto-de-cooperacion-portuaria-seacop-iii/

and relevant EU agencies has been underlined through the development of a Crime-Information Cell designed to facilitate effective information exchange (Commission, EEAS, Frontex).

In the Indian Ocean, EUNAVFOR's Operation Atalanta remains the core element of the EU's action against piracy off the Horn of Africa and in the Gulf of Aden. In July 2018, its mandate has been extended until the end of 2020 and its operational headquarters were moved from Northwood in the UK to Rota in Spain in 2019. Operation Atalanta's mandate was also further adapted to allow it to report to Interpol and Europol on illicit maritime activities and maritime crimes other than piracy (such as human trafficking, illegal fishing, smuggling of arms and drugs). The EEAS and Commission continued to remain in close contact with the operation's command (EMSA providing Copernicus maritime surveillance services).

Through the EEAS, the EU helped set up trilateral cooperation between Mozambique, South Africa and Tanzania to combat drug trafficking in order to reduce the flow of heroin into Africa and Europe.

In their reports, Frontex and the EFCA reported on multipurpose and joint operations deployed in European sea basins (the Mediterranean and the Black Sea) to: (i) perform border surveillance; (ii) contribute to SAR operations; (iii) support migration management; (iv) prevent and detect cross-border crime; (v) implement fisheries control; and (vi) support MS in carrying out CGF missions. The EFCA contributes to such operations with the chartered offshore patrol vessel *Lundy Sentinel*.

The European Commission, EFCA and MS have been implementing a joint operation in cooperation with southern Mediterranean countries (Algeria, Tunisia, Morocco, Egypt) to support fisheries control and surveillance in the Strait of Sicily. This cooperation followed the decisions adopted by the General Fisheries Council for the Mediterranean (GFCM) under the MEDFISH4EVER resolution[18]. This cooperation made it possible to adopt an international fisheries control scheme under the GFCM, which has been implemented since 2019.

The EU also continued to develop its core partnership with NATO on maritime-security operational activities. MS (HR, PT, ES) reported on their participation in NATO's Sea Guardian maritime-security operation through periodic assignment of national forces to NATO standing maritime groups. MS (PL, LT, FI) also reported on their participation in NATO multinational exercises such as OPEN SPIRIT. In addition, MS reported on their ongoing participation in NATO's Shipping Centre (a part of NATO's Maritime Command that deals with merchant shipping) and NATO's standardisation working groups on maritime security. The EU institutions and MS (EEAS, IT, ES, PL) also reported on increased cooperation efforts between EUNAVFOR MED's Operation Sophia and NATO's Operation Sea Guardian in the Mediterranean to foster exchange of information and mutual logistical support.

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[18] https://ec.europa.eu/maritimeaffairs/content/two-new-signatories-malta-medfish4ever-declaration_it

The common set of proposals adopted after the 2016 EU-NATO joint declaration[19] has been implemented through cooperation between the EU and NATO maritime centres of excellence and training centres, with a view to promoting a common understanding of maritime challenges and improving responses. The Commission also cooperates with NATO on security and information exchange in the field of chemical, biological, radiological and nuclear (CBRN) safety. A workshop called "Building Capacities, Strengthening Resilience: EU and NATO partnerships for addressing CBRN risks and threats" took place in January 2020. Regular staff-to-staff meetings were also reported by several EU entities (EEAS, EDA and Commission).

Member States continued to carry out activities to strengthen operational cooperation and training in maritime security in their relationships with non-EU partners, which was especially helpful in fostering information sharing and interoperability (IT, FR, ES). These activities took the form of international exercises with west African countries, such as the Obangame Express exercise (conducted by the US military command AFRICOM) and the NEMO exercise (conducted by France). EU institutions and MS (EEAS, ES) have also continued to promote the participation of non-EU countries, in particular South American countries, in EUNAVFOR's Operation Atalanta with Colombia to become soon a new non-EU contributor to the operation. Invitations have also been extended to Chile and Peru.

To foster cooperation in the fight against drug trafficking, the Commission renewed in 2018 its funding for an additional 3 years period for the EU's Maritime Analysis and Operations Centre – Narcotics (MAOC(N)) to support its activities in the Atlantic Ocean, especially in the West Indies. Frontex provided technical and operational assistance to MS investigation bodies under a specific pilot project called Investigation Support Activities – Cross Border Crimes, which targets cocaine and hashish-trafficking routes from Latin America and north Africa.

In the fight against migrant smuggling, European agencies (Europol, Frontex and EASO) published a joint report on *Tackling Migrant Smuggling in the Western Balkans*. Frontex also developed relations with non-EU countries and reported on its growing network of liaison officers in Turkey, the western Balkans, Niger and Senegal.

The EU has actively promoted the elimination of forced labour, child labour and other forms of labour abuses in sea-based activities, in cooperation with the International Labour Organisation, including through projects such as the Ship to Shore Rights project in Thailand.

MS (PT, FR, IT) reported on their increased presence in the Gulf of Guinea region through multilateral exercises, surveillance operations, and joint training activities with local authorities to support the implementation of the Yaoundé Architecture for Maritime Security and Safety.

Following the Council conclusions on security and defence of June 2019, the Political and Security Committee endorsed the Coordinated Maritime Presences (CMP) concept in July 2019. The CMP proposes a new and flexible tool aimed at strengthening the EU's role as a

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[19] Joint declaration by the President of the European Council, Donald Tusk, the President of the European Commission, Jean-Claude Juncker, and the Secretary General of NATO, Jens Stoltenberg of 8 July 2016.

long-term security partner and maritime-security provider. In line with the EU global strategy and the Council conclusions on global maritime security of June 2017, the CMP will rely on coordinating the deployment of MS naval assets in maritime areas that are of strategic importance for the EU in order to bolster common awareness in these areas and promote international cooperation at sea.

The EEAS also reported on the gradual development of operational cooperation with India in missions to counter piracy in the Indian Ocean.

Activities initiated or planned in the reporting period

EU institutions (Commission, EEAS) will continue to mainstream the issue of maritime security in international conferences on global ocean governance, in particular by preparing new commitments and announcing them at these events.

Maritime security will be a part of the upcoming EU-China Cooperation Agenda 2025 (involving the Commission and EEAS).

In line with the EU policy cycle for fighting organised and serious international crime (EMPACT) for the period 2019-2021, Frontex and the Commission will be involved in several cooperation activities targeting countries of the southern neighbourhood[20] and in a cooperation plan with Ukraine on coast guard joint actions.

Under the leadership of the EEAS, a first pilot case of the new concept of CMP will be launched in the Gulf of Guinea region.

2.2 MARITIME AWARENESS

Reporting entities (countries and EU bodies):

- Member States: IT, BE, MT, HR, ES, FI, PT, RO, LT, FR, PL
- EU institutions, bodies and agencies: Commission, Frontex, EFCA and EDA

Achievements and progress (by theme) emerging from reports across all actions

A. Efforts to **ensure access to additional/complementary maritime information** have become a priority in the last 2 years for most of the reporting countries and EU bodies. The aim is to enable each authority/agency to consolidate its maritime-surveillance picture with information from other national and European surveillance systems and avoid the duplication of collecting efforts. This would allow for a more complete picture of the situation at sea, foster complementarity between national and European systems, and improve the overall performance of actions in support of maritime security.

MS authorities reported on consolidated mechanisms, networks, initiatives and projects setting up permanent and/or ad-hoc exchanges of information among their respective systems (BE, IT, HR, ES, FI, PT, FR, MT, PL). These activities took place at different levels:

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[20] Such as the EU4bordersecurity project.

(i) at national level (between authorities in the same MS);
(ii) at EU level, using European systems managed by EU agencies (i.e. EMSA and the SSN system; Frontex and the European Border Surveillance system (EUROSUR) and the EFCA and the VMS system);
(iii) through voluntary networks such as the Common information-sharing environment (CISE) - an EU initiative which aims to make EU and EU/EEA Member States' maritime-surveillance systems interoperable, across sectors and borders, and the Maritime surveillance network of the defence community (MARSUR) which enables voluntary exchange of maritime surveillance information among the participating members[21] and has the potential to contribute to a future EU maritime-security architecture.

The reports also highlight actions aimed at sharing awareness and de-conflicting information with partners. Many of these actions took place through coordinated mechanisms[22] and through consolidated exchanges with international partners such as the UN, Interpol and NATO. (ES, FI, PT, FR, IT, LT, PL and EEAS, EFCA, Frontex).

In addition, progress was also reported in setting up stable and regular exchanges of information between MS at regional level (and in some cases with non-EU countries) in European sea basins such as the Baltic, the North Sea, the Mediterranean and the Atlantic (BE, FR, ES, FI, PT, LT, IT, PL).

Similarly, as part of their inter-agency cooperation on CGF, EU agencies implemented specific service-level agreements enabling the EFCA, EMSA and Frontex to exchange information collected in their respective systems[23]. These three agencies also agreed on ways to improve information exchange to support multipurpose maritime activities, such as sightings of suspicious fishing activities or potential marine pollution. Finally, these agencies also reported activities and achievements to improve information exchange with their sectoral stakeholders in the MS[24].

In the light of a benchmark study commissioned by EDA to enhance the operational use of MARSUR, the MARSUR community is in the process of identifying the way ahead for the network, an issue that they also addressed through the participation to the on-going OCEAN 2020 Project. Connectivity of EU SATCEN with MARSUR has been achieved and efforts to connect MARSUR with OCEAN 2020, CISE and EUROSUR are ongoing.

The EEAS has closely followed developments in CISE and MARSUR, encouraging both the EDA and MS to develop connectivity and complementarity between the two networks.

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[21] Currently 20 EU Member States, Norway and EU SATCEN.

[22] Such as the shared awareness and de-confliction mechanisms in the Mediterranean (supported by EUNAVFOR Operation SOPHIA) and in the Horn of Africa (supported by EUNAVFOR Operation Atalanta and MSCHOA).

[23] Based on a service-level agreement, the EFCA is providing fishing vessel positions (using a vessel-monitoring system - VMS) to the EMSA for the provision of services to national authorities carrying out search-and-rescue missions (SAR) and services to Frontex for border surveillance within EUROSUR.

[24] In the framework of the JDPs (joint deployment plans), the EFCA is sharing with all competent authorities information about the position and activities of fishing vessels in all EU areas and international waters, contributing directly to fisheries-control coordination between the Member States.
The new Regulation 2019/1896 (December 2019) has enlarged the EUROSUR information-exchange and cooperation framework to cover all aspects of border management with the exception of migrant returns.

The Commission also formulated policies, legislation and implementing acts to foster information exchange between EU agencies, between EU agencies and MS, and between MS authorities. In this context, it is worth mentioning the new EUROSUR[25] Regulation; the new European Maritime Single Window environment[26] Regulation (EMSWe Regulation); Commission Implementing Decision 2018/1986 on fisheries inspection[27]; and documents setting up the CISE transitional phase to operations.

Efforts were made at both MS and EU level to enable the use of remotely piloted aircraft systems (RPAS) to complement existing 'terrestrial' information while avoiding duplication with the satellite services provided by the Copernicus programme.

The EU agencies involved in CGF cooperation reported advanced cooperation on RPAS services through: (i) the sharing of the EMSA's RPAS capabilities, best practices, and lessons learned; and (ii) common procurement. The aim of both of these developments was to improve the accuracy of the information provided to user communities. This cooperation also aimed to ensure complementarity with space-based information offered by Copernicus maritime-surveillance services. EU agencies also reported on cooperation activities with MS involving the deployment of agencies' RPAS capabilities in Greece, Italy, Malta and Portugal, to support national and joint operations and exercises. MS reports (IT, FI, PT, PL, RO) described their involvement in activities supporting the development of the agencies' RPAS capabilities to improve the performance of specific maritime operations. These operations included: detection and response to maritime pollution; SAR operations; operations to detect illegal fishing; operations to prevent drug trafficking; and operations to prevent illegal immigration.

B. Most of the reports detailed the sustained activities aimed at exchanging **advanced (tailor-made) information across sectors and borders**, underlining the direct benefit of these exchanges to operational activities**.** Overall, the general intent is to move away from sharing data (where 'data' is understood as raw, disaggregated or unverified information) and towards exchanging information (where 'information' is understood as completed sets of aggregated, quality-checked and verified data) and intelligence (where 'intelligence' is understood as interpretations of this information).

As part of these efforts, MS (BE, IT, HR, ES, PT, FI, RO, LT, FR) reported on their achievements and ongoing work on more advanced exchanges thanks to artificial intelligence and information services that are able to filter or fuse data. These activities, which also looked at integrating satellite images and other satellite products (provided by the Copernicus, GALILEO and EGNOS programmes), have been facilitated by MS participation in dedicated EU-funded projects and activities[28]. MS (PT, BE, FI, LT, PL) also reported on their efforts and achievements in analysing existing information exchanges and/or integrating all surveillance sources (including RPAS and satellite imagery) in a single system. The aim of this was to make it possible to use artificial-intelligence data processing and thus provide enhanced, exhaustive and robust maritime situational awareness.

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[25] The implementing act (in development) for the new Regulation 2019/1896, which entered into force in December 2019 repealing the previous EUROSUR Regulation (1052/2013).

[26] Regulation (EU) 2019/1239 of the European Parliament and of the Council of 20 June 2019 establishing a European Maritime Single Window environment and repealing Directive 2010/65/EU.

[27] COM Implementing Decision 2018/1986 sets up 'specific control and inspection programmes' which in turn are operationalised though the EFCA's JDPs.

[28] Such as the activities and projects aimed to support the implementation of EUROSUR, EMSWe, the Union Maritime Information and Exchange System, and CISE etc.

The service-level agreements between the EU agencies involved in inter-agency cooperation on CGF (Frontex, EFCA, and EMSA) have eased the exchange of tailor-made information from data collected in their respective systems, including space observations through Copernicus. This in turn enabled the agencies to better conduct SAR missions, counter pollution, fight maritime cross-border crime, and prevent illegal fishing. The work carried out between the three agencies on multipurpose maritime operations (MMO)[29] facilitated the development of advanced information services in areas such as: multipurpose aerial services; anomaly detection; coastal monitoring; and vessel detection. This work also facilitated the development of maritime analysis tools to adapt reaction capabilities and support operational activities with specific information on risk analysis.

In their support to MS on improving maritime situational awareness, the three agencies also conducted an exercise to map all data and services shared with MS. As a result, they created, described and reviewed the first few data sets.

EU agencies also reported on activities carried out with MS authorities to develop advanced services aimed at supporting their community of users. Among these, the IMS – Integrated Maritime Services and Copernicus Maritime Services (both managed by the EMSA within the Union Maritime Information and Exchange System); (ii) the EUROSUR fusion services[30], including multipurpose aerial surveillance (managed by Frontex); (iii) the EFCA-managed IMS[31]; and (iv) and MARSUR network (supported by EDA)[32]. This work also facilitated the integration of satellite imagery with the support of the EU's SatCen and Copernicus programme, and benefited from the achievements of the above-mentioned cooperation between the three agencies, based on direct user input (bottom-up).

EDA, in close cooperation with EU SatCen, implemented in 2019 the "Geospatial Information to Support decision Making in Operations" project ("GISMO GeoHub") in the OHQ Rome of EUNAVFORMED Operation SOPHIA. The fielding of GISMO GeoHub to OHQ Rota in support of EUNAVFOR Operation ATALANTA is planned for 2020.

The Commission also worked to improve the quality and usefulness of information-exchange services. Policies issued and legislation passed since 2018 either set up or encouraged relevant work at MS and EU-agency level. For example, the new EUROSUR regulation - which aims to provide added-value information services and surveillance tools for the user community and EMSWe regulation – that introduces further harmonisation in reporting obligations for a port call in EU,[33] increasing, de facto, the surveillance capacity of national authorities. In addition, in its current phase (transition to operations) CISE seeks to facilitate similar developments by tailoring and sharing already available information across sectors and borders, and by integrating satellite images in future CISE-enabled services.

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[29] A concept developed by the ECGFF.
[30] The new EUROSUR Fusion services are providing Member State authorities with added-value information services related to integrated border management, including risk analysis, social-media monitoring, big-data analysis and monitoring of pre-frontier areas
[31] The EFCA IMS service (developed in cooperation with the EMSA) enables behaviour analysis, risk assessment, and classification of possible non-compliance targets to fisheries-monitoring centres in Member States. It also facilitates the EFCA's assessment and follow-up of fisheries-monitoring activity.
[32] MARSUR Network is the maritime defence community network for voluntary exchange of maritime surveillance information among the participating members.
[33] The new reporting obligations include data requirements that facilitate electronic exchange of information between concerned authorities.

C. MS and EU agencies reported on achievements and ongoing efforts to **improve interoperability and interconnectivity between legacy systems**, with the aim of facilitating direct, reliable and real-time sharing of information at national and EU level.

Acknowledging the importance of interconnected systems, MS authorities reported on national and EU-funded activities to improve interoperability between their national systems, across sectors. This work also contributed to interoperability between national systems and European sectoral systems (i.e. SSN, EUROSUR, VMS), and with voluntary networks such as CISE (BE, IT, HR, PT, MT, LT, ES, MT, FI, PT, PL).

In addition, the EDA supported MS in developing options to integrate MARSUR into the European surveillance landscape, including by integrating newly developed sensors and connecting MARSUR to other networks such as CISE. Work on future development of MARSUR hardware and software was reported by ES, FI, PT, IR, RO, LT, FR, and PL.

EU agencies (Frontex, the EFCA, and the EMSA) reported on activities and processes to improve interoperability between European and national systems, with the overall aim of facilitating system-to-system interaction and better supporting the end-users of these systems. For example, Frontex reported on its current work to support the implementation of the European Border and Coast Guard Regulation by integrating EUROSUR in the functioning of the European Border and CoastGuard and improving its functioning. The EFCA has also been consolidating the sharing of information: (i) on fishing-vessel positions to support national authorities carrying out SAR services (enhanced SAR SURPIC); and (ii) for border surveillance within EUROSUR. The EFCA has also been an active player in the development of CISE.

The EMSA has been actively involved in implementation of the European Maritime Single Window environment (EMSWe), contributing to the establishment of the EMSWe data set. The agency was also responsible for the development of a common message-implementation guide for system-to-system communication and for setting up harmonised rules for manual reporting to the authorities. In addition, the EMSA will also develop common databases for static ship data to be made available to maritime users.

The EDA achieved the connectivity of EU SatCen with the MARSUR network, and supported efforts to connect MARSUR with OCEAN 2020 and CISE. Discussions with Frontex on connecting MARSUR and EUROSUR are ongoing.

Through direct grants, the Commission has supported specific projects aimed at increasing interoperability: among national systems, across sectors and borders (as part of the CISE development[34]), and between European systems and national systems.

MS and EU agencies (MT, PT, the EFCA and Frontex) also reported participating in activities aimed at improving the interoperability of national and EU surveillance systems with systems of non-EU countries, including the systems promoted by the EU's critical maritime routes programme; and the maritime-security (MASE) programme. The Commission reported on the achievements of dedicated projects such as MASE, CRIMARIO and GoGIN[35]aimed at developing interoperability solutions to increase information exchange with – and between – non-EU partners in the Indian Ocean and the Gulf of Guinea.

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[34] https://ec.europa.eu/easme/en/implementation-common-information-sharing-environment-cise-eu-maritime-domain-ensuring

[35] Crimario https://www.crimario.eu/ and GOGIN https://gogin.eu.

D. Reports reflected specific work to **digitalise and automate** information **exchanges across sectors**. This work focused on establishing fast and reliable information exchange as well as on swiftly integrating information in legacy systems. The goal was to improve the efficiency of operators/operational centres, thus increasing the efficiency of the decision-making process and of operations at sea in general.

MS authorities (BE, IT, PT, LT) highlighted their efforts to upgrade the systems and working methods used to gather and share information, in order to speed up and/or automate system-to-system information exchange.

This effort by MS has been acknowledged and supported by EU agencies, especially those involved in inter-agency cooperation on CGF. SatCen and the EDA also reported dedicated work to both automate information sharing, and digitalise and standardise the input and output of data in and from their systems.

MS reported actively participating in the dedicated activities set up by EU agencies to improve the functionality of European systems managed by the EMSA, Frontex and EFCA (BE, MT, ES, FI, RO).

The new legislation[36] issued by the Commission also aims to support the work of the MS and EU agencies for the above-mentioned objectives.

E. In most of the reporting countries and agencies, **CISE is perceived as a strong** facilitator of information exchange across sectors and as an enabler of complementarity between different maritime-surveillance systems (FR, PT, FI, MT, BE, IT, ES, EFCA, Frontex, EDA).

MS authorities and EU agencies reported strong commitment to the CISE transitional phase coordinated by the EMSA, pointing to their regular participation in the CISE stakeholder-group meetings and dedicated working groups (IT, PT, BE, MT, HR, FI, PT, FR, ES, RO, EFCA, Frontex, EDA). They also reported a variety of activities to: (i) implement CISE interoperability solutions and connect through this European platform; (ii) develop new useful/critical information services; (iii) extend interconnectivity with other MS and European agencies; and (iv) set up a (legal) framework for sharing information.

Commission DGs have worked together, and in close cooperation with MS, to: (i) set up a path to progress CISE from the test and prototype phases to the operations phase; and (ii) ensure suitable complementarity between CISE and the existing mandatory systems in EU law. As a result, the CISE transitional phase began in May 2019, preparing the ground for the deployment of CISE post 2020. This transitional phase is managed by the EMSA and benefits from the technological and scientific support of the JRC. It builds on the results and achievements of the EUCISE2020 project (which focused on the test and prototype phases) and the national interoperability projects. 21 MS and EEA countries and 5 EU agencies already participate actively in the transitional phase[37]. Moreover, as indicated in the 2014 Commission Communication on CISE, the Commission conducted a review to assess the implementation of a maritime CISE and the need for further action in this area[38]. Based on the

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[36] i.e. on EMSWe, EUROSUR.
[37] http://www.emsa.europa.eu/cise/stakeholders.html
[38] https://op.europa.eu/en/publication-detail/-/publication/00692e69-d2b4-11e9-b4bf-01aa75ed71a1/language-en

study, it published a Commission staff working document on the review of CISE in September 2019.[39]

In addition, in the 2016-2019 period, 13 national and cross-national projects[40] financed by grants provided under European Maritime and Fisheries Fund (EMFF) direct funding, worked to adapt the legacy systems of national maritime authorities and enhance interoperability between them. Their goal in this work was to increase the readiness of these legacy systems to connect to the network developed by the EUCISE2020 project. MS also had the opportunity to access funds for developing CISE nationally through the EMFF operational programmes (shared management).

F. Finally, most of the reporting authorities (BE, IT, HR, PT, LT, PL) mentioned activities aimed at **guaranteeing the security of both their systems and the exchange of information**. The purpose of these activities was to make their systems resilient to cyber-attacks and capable of handling classified and sensitive information. Another goal is to ensure that the information exchanged is reliable and of high quality.

These goals are shared by new and updated EU legislation[41], which aim to align the various systems with the NIS Directive and all EU cybersecurity legislation[42]. Work on this alignment has been reported at MS level[43] by countries that transposed the NIS Directive and that are now seeking to implement this updated national legislation on cybersecurity in their system upgrades (PT, FR, LT).

MS efforts on cybersecurity are visible in their involvement in:

(i)   the work strand related to the European Coast Guard Functions Forum (ECGFF) (IT, ES, PT, FI, PL);
(ii)   specific work to improve national coordination in this field (ES, PT, FR, RO);
(iii)   activities to implement the NIS Directive and the certification mechanism nationally (PT, RO, FR);
(iv)   CISE activities in this field (IT).

EU agencies involved in the inter-agency cooperation on CGF have also reported activities to improve the security of their systems and of their information exchanges with MS.

Activities initiated or planned in the reporting period

MS and EU bodies also reported on activities initiated or planned in the reporting period that will directly contribute to maritime awareness when completed. Some of these activities are set out below.

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[39] COMMISSION SWD on the Review of the Common Information Sharing Environment (CISE) for the maritime domain: 2014 - 2019 https://ec.europa.eu/maritimeaffairs/sites/maritimeaffairs/files/docs/body/swd-2019-322_en.pdf.

[40] National projects supported through the EMFF to enhance interoperability between maritime surveillance systems in the CISE context involved around 25 authorities from 9 MS.

[41] See footnote 33.

[42] EU Cyber-security Act - https://ec.europa.eu/digital-single-market/en/eu-cybersecurity-act.

[43] For example, Portugal applies ISO 12701 to ensure the security of all CIS. All information systems, including the CISE connection, must follow the ISO procedure to be approved to enter in operational status.

- Along with EU agencies, MS have embarked upon the CISE transition phase initiated in May 2019 by nominating representatives and actively contributing to the activities of different working groups coordinated by the EMSA under the Commission's (MARE, JRC) guidance and support. This work, which will be further supported by the future EMFF, is perceived by MS and EU bodies as improving consistency and awareness between different national and EU maritime-surveillance systems and tools (BE, IT, ES, FI, PT, FR, EMSA, EFCA, Frontex, EU SatCen). In early 2020, the Commission launched a dedicated study to develop and support the implementation of an IT security framework for the CISE network and information exchange. This essential work will directly contribute to the overall efforts of MS and EU agencies to implement a fully operational CISE.

- MS reported their participation in common activities initiated in 2019, such as:

  (i)   European projects under Horizon 2020 and PESCO[44] (IT, PT, FR);

  (ii)   the actions conducted under inter-agency cooperation on CGF to develop useful coordination and information-exchange capacities, such as MMO (IT, PT, FR, RO, ES);

  (iii)   specific activities to further develop MARSUR[45] (IT, PT).

- EFCA, EMSA and Frontex, in close cooperation with MS experts, are leading the process of drafting the practical handbook on European Cooperation on Coast Guard Functions. The process started in 2019 under the coordination of the EFCA (as the agency leading the capacity-building work strand of inter-agency cooperation on CGF), and is directly supported by the Commission. The handbook is expected to become a useful tool to support operational cooperation on CGF, and the exchange of information in particular.

- The Commission began work in the reporting period to develop the implementing act on the situational pictures of the European Border Surveillance System (EUROSUR). The Implementing Act specifies and standardises the reporting in EUROSUR to improve information exchange and cooperation by specifying the rules for reporting in EUROSUR including the type of information to be provided, the time limits for reporting and the entities responsible for processing EUROSUR information as well as the related procedures. The adoption of the Implementing Act is expected by the end of 2020.

- The Commission, with the support of EMSA, has begun to implement the EMSWe by working with MS experts on: (i) a common dataset for reporting obligations for a port call in the EU[46]; (ii) drawing up specifications for the common components of the reporting environment such as a common user registry and access-management system; and a harmonised reporting interface module (for system-to-system communication) to be integrated in existing maritime national single windows. The implementation will be completed by Q3 2025, when the Regulation shall fully apply.

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[44] i.e. COMPASS2020, OCEAN 2020

[45] The follow-on project MARSUR III is expected to be launched by October 2020. It aims to increase operational use of MARSUR; improve connectivity with CISE; and improve network security to facilitate classified information exchange.

[46] The EMSWe data set includes customs formalities and declaration of health, as well as person on board and statistical information.

2.3 CAPABILITY DEVELOPMENT, RESEARCH AND INNOVATION

Reporting entities (countries and EU bodies):

- MS: PT, LT, MT, IE, ES, HR, FI, IT, RO, FR, PL
- EU institutions, bodies and agencies: Commission, EEAS, Frontex, EFCA and EDA

Achievements and progress (by theme) emerging from reports across all actions

A. **Capability development to support maritime security** continues to be a priority for MS. The harmonisation of capability requirements called for in the EUMSS action plan is being developed for military capabilities, with two maritime priorities included in the 2018 EU capability-development priorities[47]: (i) underwater control contributing to resilience at sea; and (ii) naval manoeuvrability. The latter is particularly relevant for developing multipurpose capabilities and encompasses maritime situational awareness. Dedicated strategic context cases describe in concrete terms what the current capability situation is, including the activities planned or already ongoing at national and/or multinational level to address the shortfalls and to improve the level of coherence of the European capability landscape covered by these priorities[48]. MS also (i) established two new EDA project teams aiming to work on the identified priorities through new collaborative projects; and (ii) set up a maritime-test-centres network of excellence to harmonise test procedures for the qualification and certification of maritime defence systems.

On specific capability projects, efforts at national level focused on maritime-surveillance capabilities such as operational centres able to fuse data from civil and military systems and thereby generate more accurate maritime situational awareness (ES, PL, PT). Civil-military cooperation continues to be pursued through partnerships enabling the development of specific capabilities, for example RPAS for the maritime environment (PT). MS also highlighted the six ongoing maritime projects under PESCO[49], which underline the importance of – and political support for focusing on – the maritime domain in the overall work to fulfil the PESCO binding commitments. Long-established collaborative projects such as MARSUR continue to be implemented.

Because of the increasing cybersecurity challenges to both governmental and private stakeholders in the maritime domain, cybersecurity requirements are widely integrated in new capability projects and regulations. Ensuring sufficient levels of cybersecurity is considered even more essential following the introduction to the maritime domain of emerging technologies such as autonomous vessels, blockchain, remotely piloted systems, and the internet of things. Close coordination among key stakeholders at national level enables harmonisation of requirements and consistency in approaches (IT, LT, PT, RO). Preventing cyber attacks is also the focus of a dedicated ECGFF working group, which aims to strengthen the collective capacity of coast guards to detect and protect against such threats

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[47] For more details on the Capability Development Plan and the agreed 2018 EU capability development priorities, see: https://eda.europa.eu/docs/default-source/eda-publications/eda-brochure-cdp

[48] For more information on the strategic context cases, see: https://www.eda.europa.eu/docs/default-source/eda-factsheets/2019-10-25-factsheet-scc

[49] For more information, see: https://pesco.europa.eu/.

(FI, FR, IT, Frontex). Energy efficiency and reducing greenhouse gas emissions in the maritime domain is another area where MS have increased their efforts, in line with IMO resolutions, for instance by drawing up specific roadmaps to develop technology building blocks[50] with EDA support (FI, HR, LT, PT, RO).

The three agencies involved in the inter-agency cooperation on CGF have continued to help MS evaluate the adequacy of their current capacity to address expected security challenges and threats. In this work, the three agencies have worked directly with national experts to assess needs and evaluate new systems. The three agencies also acquired specific capabilities to implement their mandate and support MS at operational level. For example, Frontex leased manned aircraft to provide aerial surveillance services, and the EFCA chartered an offshore patrol vessel[51].

Cybersecurity and defence are equally high on the agenda of EU institutions and agencies. Notable examples include: (i) a Commission study on ensuring CISE security; (ii) coordination with national authorities to ensure implementation of the NIS Directive; and (iii) the inclusion of cyber challenges across all military domains of operations in the 2018 EU capability development priorities.

At international level, the EEAS (in cooperation with EU INTCEN, CERT-EU, Europol and ENISA) supported the creation of a framework for a joint EU diplomatic response to malicious cyber activities. The goal of this response is to allow the High Representative and Council to resort to all common foreign and security policy measures – including restrictive measures if necessary – to address malicious cyber activities affecting the integrity and security of EU businesses and citizens.

B. In line with the objectives of the EUMSS action plan, **research and innovation to improve the development of effective maritime capability** continue to be pursued through national and collaborative projects and programmes. EU funding remains an important incentive for this work. For example, the Horizon 2020 programme on secure societies has funded research and innovation for maritime security[52]. Notable examples of projects that received funding include BorderSens[53] (dealing with detection of drug-smuggling) and CAMELOT[54] (aiming to monitor borders and pollution – both on land and at sea – through a system that uses sensors and unmanned systems). Other relevant projects are MARISA[55] (developing innovative maritime surveillance knowledge), COMPASS2020[56] (demonstrating

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[50] For more information, see: https://eda.europa.eu/docs/default-source/brochures/eda-osra-brochure.pdf.

[51] This vessel is being operated under the JDPs implemented by the EFCA and the EU MS to monitor fisheries activities in the North Atlantic, the Mediterranean and the Black Sea. It is also available to support other coast guard functions as part of the EU coast guard initiative.

[52] For more information, see: https://ec.europa.eu/programmes/horizon2020/en/h2020-section/secure-societies-%E2%80%93-protecting-freedom-and-security-europe-and-its-citizens

[53] "Border detection of illicit drugs and precursors by highly accurate electrosensors". For more information, please see CORDIS project fiche: https://cordis.europa.eu/project/id/833787 and website: http://bordersens.eu/

[54] "C2 advanced multi-domain environment and live observations technologies". For more information, please see CORDIS project fiche: https://cordis.europa.eu/project/id/740736 and website: https://www.camelot-project.eu/

[55] "Maritime Integrated Surveillance Awareness". For more information, please see CORDIS project fiche: https://cordis.europa.eu/project/id/740698 and website: https://www.marisaproject.eu/

[56] "Coordination of Maritime Assets for Persistent and Systematic Surveillance". For more information, please see CORDIS project fiche: https://cordis.europa.eu/project/id/833650 and website: http://www.compass2020-project.eu/

combined use and coordination of manned and unmanned assets for maritime surveillance), RANGER[57] (dealing with innovative radar technology for maritime surveillance) and SAR, ALFA[58] (aiming to improve detection of low flying aircrafts) and ANDROMEDA[59] (researching on enhancing the CISE model). Furthermore, Horizon 2020 research topics leading to research and innovation projects include "security on-board passenger ships" and "improved systems for the vessel tracking, behaviour analysis and automatic anomaly detection". In 2020, the Commission (DG HOME) and Frontex co-signed Terms of Reference[60] for the latter to better assist the Commission and cooperate on research and innovation relevant for border security, including maritime border security.

In parallel to these efforts, MS fully support the complementarity between civil and defence research programmes, stressing: (i) the benefits of dual-use technologies that could receive funding from civil programmes; and (ii) the importance of participation by defence forces in these programmes. The EDA continues to participate in the committee of the secure-societies programme to ensure coordination, complementarity and, where possible, synergies on research for dual-use technologies.

On defence research, MS emphasised their participation in the EU's OCEAN 2020 maritime-surveillance project, the largest project funded by the EU's preparatory action for defence research. OCEAN 2020 was undertaken by a consortium of 42 entities from 15 countries (including ES, LT, and PT). The project is particularly relevant for the EUMSS action plan as it aims to provide the EU and European defence forces with the demonstration of a comprehensive overarching IT system, a 'system-of-systems'. This system-of-systems would be an open-architecture solution, interoperable with national maritime-operations centres to achieve integrated situational awareness. The project also seeks to better plan, operate and task deployed equipment, particularly unmanned systems. The first live demonstration took place in the Mediterranean Sea in November 2019, and a second live demonstration will take place in 2021 in the Baltic Sea.

Portugal also reported on: (i) its annual exercise involving industry and academia working together on maritime unmanned systems (called Recognised Environmental Picture – Maritime Unmanned Systems or REP-MUS) and (ii) promotion of cross-sectoral research cooperation. EU staff interactions, for example joint workshops on technology foresight between EDA and Frontex, also contributed to cross-sectoral efforts. Frontex also continued to carry out technology pilot projects to test the deployment and use of innovative surveillance resources, including medium-altitude, long-endurance RPAS and aerostats used in CGF. Frontex shared its results with MS and relevant EU agencies.

At EU level, the joint civil-military maritime research agenda (drafted by the Commission, EEAS and EDA in 2017) remains an important reference document. The implementation of priority areas in the maritime research agenda was boosted, amongst others, by: (i) collaborative activities within the EDA's maritime Capability Technology Group (CapTech

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[57] "Radars for Long distance maritime surveillance and SAR operations". For more information, please see CORDIS project fiche: https://cordis.europa.eu/project/id/700478 and website: https://ranger-project.eu/
[58] "Advanced low flying aircrafts detection and tracking". For more information, please see CORDIS project fiche: https://cordis.europa.eu/project/id/700002 and website: https://alfa-h2020.eu/
[59] "An enhanced common information sharing environment for border command, control and coordination systems". For more information, please see CORDIS project fiche: https://cordis.europa.eu/project/id/833881 and website: https://www.andromeda-project.eu/
[60] https://ec.europa.eu/home-affairs/news/20200206_european-research-innovation-support-secure-efficient-eu-external-borders_en

Maritime)[61]; (ii) studies financed by the EDA operational budget; and (iii) technology-building-block roadmaps being developed under the EDA's Overarching Strategic Research Agenda (OSRA). MS also updated the CapTech Maritime's defence-focused Strategic Research Agenda, which may be used for a future revision of the maritime research agenda.

C. MS also reported on the measures implemented to **support industrial innovation and cooperation**, including the establishment and maintenance of strong linkages with maritime industrial clusters. Navies continue to be an important driver for developing critical technological systems and supporting industrial capacities. MS perceive these technological systems and industrial capacities as essential for future maritime capabilities. Developing these systems and capacities is therefore an explicit objective in various military procurement laws. Developing autonomous systems continues to be an important priority for MS, considering the expected benefits of such technologies in terms of efficiency, range, and durability (PT, RO). Several initiatives have taken place (e.g. in IT and PT) to foster direct contacts with industry, including a panel dedicated to capability development in modern navies during the October 2019 Regional Seapower Symposium[62] in Italy. In November 2019, the EDA launched a dedicated online platform to facilitate cross-border partnerships between European defence-industry stakeholders.

Some MS have used national and EU structural and investment funds to stimulate innovation across the maritime technological and industrial base, as called for by the EUMSS action plan. In some cases, specific guidelines have been drawn up for both the national navy and national maritime authorities (PT). In other cases, MS have reported ongoing work on their national research and investment strategy (MT). A specific online tool - IdentiFunding[63] - was launched by the EDA in March 2019 to enable swift matching of relevant projects from the maritime technological and industrial base with eligible funding opportunities at European level. This tool has already been used by 40 entities from the naval sector.

Lastly, MS defence ministries have continued to work on identifying key strategic activities (KSAs) to support the EU's defence technological and industrial base through the EDA. To date, two maritime KSA reports have been completed, one focusing on unmanned naval systems and the other on energy on board ships. Additional KSA reports could address the wider context of maritime security in the future, including space technologies.

D. MS and EU institutions and agencies further increased their **operational cooperation to support maritime security** at national and EU level, in particular to test and implement the MMO concept. This was visible in the COASTEX 19 exercise under the Italian presidency of the ECGFF. With the participation of 11 naval assets, 2 helicopters, 1 aircraft and 4 boarding teams, it helped to share expertise, test interoperability, increase joint training, and identify potential gaps.

The benefit of using EMSA services (notably through CleanSeaNet and SafeSeaNet) and SatCen imagery, as well as services enabled through the Copernicus Programme on Earth Observation, was highlighted by several MS in their national reports. Beyond their national exercises, MS also reported participating in several Frontex and coast guard operations using both national assets and the assests of EU agencies. MS reported cooperation in operations to

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[61] For more information please see: https://www.eda.europa.eu/what-we-do/activities/activities-search/captech-maritime

[62] For more information, see: http://www.marina.difesa.it/EN/facts/Pagine/rss_venice_2019.aspx.

[63] For more information, see: https://eda.europa.eu/eufunding.

counter migrant smuggling and trafficking of human beings in: (i) EUNAVFOR MED's Operation Sophia; and (ii) three operations implemented by Frontex in the Joint European Patrols Network: INDALO, THEMIS and POSEIDON (ES, FI, FR, IT, LT, PL, PT, Frontex, EFCA).

The three agencies involved in the inter-agency cooperation on CGF have been deeply committed to supporting the work of the ECGFF to develop European cooperation on CGF. They continued to assist MS in carrying out joint operations in the Mediterranean, Baltic and Black Sea regions. This assistance involved: (i) co-organising dedicated workshops; (ii) facilitating operational contacts and information exchange for maritime multipurpose activities; and (iii) implementing the MMO concept. Operational cooperation between the EFCA, EMSA and Frontex has continued to develop over the past 2 years with significant added value for these organisations' stakeholders. Frontex, in close cooperation with MS, has also started to develop minimum requirements for aerial, naval and terrestrial assets that can be purchased from MS and used in joint operations implemented by Frontex.

The Commission continues to support all agencies' work to identify: (i) future needs for operational capabilities; and (ii) research programmes and innovation investments to build those capabilities in line with priorities identified in the policy areas.

The EEAS facilitated contacts between CSDP missions and agencies providing maritime-security services (SatCen and EMSA) to allow CSDP missions to benefit from these services and consolidate their capabilities.

Future activities initiated or already planned in the reporting period

The implementation of the six maritime PESCO[64] projects offers significant potential to support EU maritime security further, alongside other forthcoming PESCO projects and multinational initiatives outside PESCO. The two new maritime project teams and the maritime test centres network of excellence within EDA will help MS address identified priorities for new collaborative projects for capability development (EEAS, EDA).

Upcoming research initiatives include projects to be funded under the heading for maritime security in the civilian domain under the Horizon 2020 secure societies work programme 2021/2022. In the longer term, research on civilian maritime-security capabilities will again feature prominently as part of security research under Horizon Europe, with maritime security as one of the priorities in the proposed Cluster 3 of the next framework programme (Commission).The NIS Directive[65] requires the Commission to conduct a review by May 2021. Due to the rapidly growing reliance on digital technology, including in the maritime domain, the review process is to commence before the end of 2020. As part of the review, the Commission will evaluate the functioning and impact of the Directive and carry out an impact assessment which may result in a new legislative proposal.

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[64] The six maritime PESCO projects are: maritime semi-autonomous systems for mine countermeasures (MAS MCM), harbour & maritime surveillance and protection (HARMSPRO), an upgrade of maritime surveillance, a deployable modular underwater intervention capability package (DIVEPACK), the maritime unmanned anti-submarine system (MUSAS), and the European patrol corvette (EPC).
[65] Article 23 of the Directive

2.4 RISK ASSESSMENT AND MANAGEMENT

Reporting entities (countries and EU bodies):

- MS: IT, BE, MT, HR, ES, FI, PT, RO, LT, FR, PL
- EU institutions, bodies and agencies: Commission, EEAS, Frontex, EFCA and EDA

Achievements and progress (by theme) emerging from reports across all actions

A. The reports show extensive concern, at national and EU level, for: **(i) consolidating the resilience of maritime critical infrastructure; (ii) the security of supply chains, containers and strategic goods; and (iii) the protection of external maritime borders,** mainly by enhancing the risk-management capacity of the competent maritime authorities.

In this regard, MS reported on: (i) capability development and procurement[66]; (ii) education and training[67]; (iii) enhanced inspections; (iv) joint civil-military missions; and (v) regular exercises to improve risk management - an essential capacity in dealing with the security of the seas and marine environment (BE, MT, ES, PT, LT, ES, IT, FR, PL). They also provided updates on: (i) the implementation of EU and national legislation; (ii) national evaluation studies; and (iii) coordination mechanisms/centres put in place to prevent and mitigate risks and threats to maritime and national security (HR, MT, PT, LT, ES).

MS reports emphasised the development and implementation of risk-based contingency and response plans aimed at effectively reacting to threats to maritime transportation and critical maritime infrastructure, mostly by joint civil-military task forces (MT, HR, LT, PT, PL). Reports also mentioned that improved information sharing through voluntary networks like CISE directly supported risk assessment (MT, IT, HR, PT, FR).

Relevant activities reported by EU institutions included research projects, workshops and exercises, at EU level and with NATO. These focused on improving detection and risk-assessment capabilities, especially for harbour protection (EEAS, EDA and Commission).

The Commission reported on the financing and monitoring of several national and transnational research projects which aim to increase: (i) detection capabilities for chemical, biological, radiological, nuclear and explosive (CBRN-E) risks (including for CBRN-E materials in containers); and (ii) overall security in ports and on ships.[68] It also reported on a longstanding collaboration to provide technical assistance and scientific support to competent national authorities for the implementation of Directive 2013/30/EU on safety of offshore oil and gas installations. This collaboration enabled the development of valuable tools and assistance[69].

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[66] PT initiated an acquisition process for additional container-control scanners equipped with x-ray technology to increase monitoring in its main container ports.

[67] The Italian coast guard is providing dedicated risk-management courses to personnel involved at different levels of responsibility in performing CGF.

[68] Among these projects funded under Horizon2020, COSMIC and C-BORD focus on the detection of CBRN-E materials inside containers; STAIR4SECURITY, ERNCIP STDS 16 and ERNCIP STDS 2017 focus on standardisation; and ChemSniff, EU-SENSE, TERRIFIC, and BIWAS focus on general detection equipment.

[69] SyRIO - System for Reporting the Incidents in the Offshore Operations (as required by Implementing Regulation 1112/2014); SPIROS (Safety Performance Indicators Reporting Platform): a web platform designed

The Commission also highlighted that in protecting critical maritime infrastructures, e.g. off-shore wind parks and their grid connections; and off-shore fibre telecom connections - the backbone of today's digital economy, the NIS Directive plays an important role as it also supporting MS in finding solutions to secure this infrastructures.

B. Many reports gave information about efforts at national and EU level to **improve both risk assessment and response capacity, specifically for cyber/hybrid threats, climate challenges and maritime environmental disasters.**

MS reported on closer inter-agency cooperation at national level – and with partners at regional and EU level – to consolidate their risk-management capabilities and better address these new and powerful threats.

Finland has been an active player in increasing resilience against hybrid threats, both nationally and at EU level. It cooperated with the European Centre of Excellence for Countering Hybrid Threats (Hybrid CoE) in Helsinki, and organised dedicated policy discussions on hybrid threats in different Council political groups during the Finnish presidency.

Following the damage caused by the high tide that hit Venice in November 2019, Italy created the International Centre for Studies on Climate Change. In particular, the centre will study strategies to adapt to natural disasters from climate change and safeguard coastal cultural heritage.

Spain published a national civil-protection strategy in 2019, which describes amongst others priority actions and the regulatory and management tools needed to face risks such as earthquakes and tsunamis. It also reported on closer cooperation with the EU's Emergency Response Coordination Centre (ERCC)/Commission to consolidate its reaction capacities in the event of contamination attacks.

Portugal has been working on implementing the NIS Directive, and in this context on setting up an information-sharing and analysis centre. This centre for the maritime domain will play a strong role in implementation, coordination and verification procedures to ensure cybersecurity in the maritime domain, including through the creation of a CERT- computer-emergency-response team.

To improve its preparedness and reaction capacity in this area, Romania initiated a series of cybersecurity initiatives in the Black Sea region, such as creating a centre of excellence, a simulator and an archive. Romania also set up a number of national expert networks and organised annual international cybersecurity events and conferences[70].

France began work to set up a computer-emergency-response ream for its newly created maritime-cybersecurity body: the Conseil de cyber sécurité du monde maritime (C2M2).

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to assist MS and the Commission with reporting on the safety performance of offshore activities; ViCOS (Virtual Centre of Offshore Safety expertise): a web platform designed to help MS find and access the required expertise to properly carry out their regulatory functions, as per Directive 2013/30/EU.

[70] BSCySeCC - Black Sea Maritime Cyber Security Conference Centre, BSCyCoE – Black Sea Cyber Security Excellence Center; MCySIM - Maritime Cyber Security Simulator; MCYSECN – Maritime Cyber Security News Archive; VRCyberEDU - Maritime Virtual Cyber Range; MCYSEKA-Maritime Cyber Security Knowledge Archive.

Cooperation between MS in this field made notable progress under the ECGFF, which in 2018 (with Germany as chair) began specific work on cyber-attack prevention in the maritime domain. A permanent working group is now looking at developing technical detection possibilities and building up a European network to help coast guards prevent cyber attacks. The permanent working group is directly supported in this by the EU agencies involved in the ECGFF.

The Hybrid CoE made progress on cooperation between MS and EU institutions on joint risk assessment to better address hybrid threats. It collaborated with the EDA to support MS projects to increase awareness and readiness to counter hybrid threats. These projects mainly focused on: (i) harbour protection; (ii) standardisation and enhancement of civil/military synergies; and (iii) interoperability between MS equipment and systems designed to fight hybrid threats[71]. The EEAS also reported on its cooperation with the Hybrid CoE, highlighting the publication of the *Handbook on maritime hybrid threats – 10 scenarios and legal scan*. The handbook describes how preparedness at all levels should be improved to address, counter and recover from hybrid threats.

The Commission also cooperated with the Hybrid CoE and contributed to the EU strategy on countering hybrid threats. The Hybrid Fusion Cell, established at the level of EU institutions, has enabled regular input and exchange of information between the EU and MS on sensitive, maritime/transport security issues. In addition, as part of EU-NATO cooperation, the Commission co-organised and participated in the EU HEX-ML18 (PACE)[72] exercise, designing relevant scenario and events, and providing assessment and expertise on maritime-security situations; facilitating better preparedness and efficient coordination of the overall EU-NATO response to maritime security threats, including hybrid.

C. In the reporting period, specific effort went into developing and implementing **common methodologies and capabilities for risk management**, in order to augment coordination between MS and EU actors in this field.

Portugal reported on ongoing inter-agency work to set up a common risk-assessment procedure in the maritime domain to be assessed by its National Maritime Coordination Centre.

Belgium's maritime administrations share information and best practices with MS authorities and actively cooperate within the framework of the EU's inter-agency cooperation on CGF.

Croatia reported that implementation of the Law on the Homeland Security System (2017) brought benefits such as: (i) stronger cross-sectoral cooperation and exchange of information between all national surveillance and monitoring systems; and (ii) joint civil-military training to increase resilience against large-scale disasters such as fires or floods. The training and exercises involved bilateral and multilateral partners. Croatia has already deployed tailored civil-military disaster-relief taskforces abroad (e.g. in Israel for firefighting and in Albania for earthquake relief).

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[71] One example is the Maritime Unmanned Anti-Submarine System - MUSAS, a PESCO project developing an open architecture system capable of: (i) commanding-and-controlling different maritime unmanned systems (MUS); (ii) integrating multiple assets and sensors; and (iii) countering underwater threats to naval forces, infrastructure and shipping.

[72] European Union Hybrid Exercise Multilayer 2018 Parallel and Coordinated Exercise

In Spain, the responsibility for cyber protection in the maritime field is shared between different ministries, which coordinate their actions according to the 2019 national cybersecurity strategy, and cooperate under the National Cybersecurity Council. The Spanish navy is also developing a cybersecurity concept that will aim to implement a good-practices guide for the maritime community and procedures for disseminating information on cyber-attacks in the maritime environment.

The ECGFF working group on cyber-attack prevention has also been an important platform for cooperation between MS seeking to develop common detection procedures and build a European network to fight cyber threats. Several countries (IT, BE, HR, PT, FI, ES) and EU agencies reported on their active participation in the workshops organised in 2019 under the Italian chairmanship[73] of the ECGFF. These workshops sought to increase awareness and exchange best practices and existing tools on risk management. Countries also reported on their active participation in the related work of other coast guard fora such as Med CGFF, Baltic Sea Region Border Control Cooperation, the North Atlantic Coast Guard Forum (NACGF) and the Arctic Coast Guard Forum (ACGF). They also reported on their bilateral work with non-EU countries (FI, PT, BE, HR, ES).

EU agencies were also active in this area. Frontex directly supported cooperation between MS in this domain through the Maritime Intelligence Community & Risk Analysis Network (MIC-RAN), set up in 2018[74]. Through this thematic network, Frontex is promoting closer cooperation within the maritime community to facilitate the exchange of maritime intelligence, the exchange of cross-border crime statistics, and the dissemination of risk-analysis products.

The EFCA continued to share information and communicate on the risk-assessment techniques used as part of fisheries control, thus supporting and increasing coordination in the fisheries control community. The EFCA also published two documents prepared jointly with MS to support the preparation of the annual risk assessment for fisheries: *Guidelines on Risk Assessment Methodology on Fisheries Compliance* and *Indicators of compliance in fisheries*.

As part of the inter-agency cooperation on CGF, in 2018 the three agencies began to cooperate on risk-management. This early cooperation involved exchanging information on the types of data, methodologies (steps, levels and objectives of risk assessment) and analytical products used by each agency[75]. In addition, the agencies discussed ways to possibly integrate their analytical products, and worked on identifying areas where they could complement each other's work. They also drafted a glossary of terms so that different communities would be able to communicate with the same terminology.

At EU level, the Commission contributed to strengthening cooperation and coordination between MS on mechanism and procedures enabling risk management by financially supporting the rotating chairs of the ECGFF and MedCGFF with the organisation of work.

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[73] The workshops focused on subjects such as: environmental protection and response, maritime security, fisheries control, and search-and-rescue operations.

[74] MIC-RAN is comprised of all competent border, coast guard, law enforcement, customs, and military authorities of Member States and Schengen Association Countries. The project is developing systematically operational and strategic-risk-analysis methodologies and capabilities against maritime cross-border crime. The aim of these methodologies and capabilities is to support: (i) multipurpose maritime/aerial surveillance and vessel-tracking operations; (ii) Member States' maritime investigations; (iii) operational planning and deployment decisions; and (iv) the development of EU cooperation on CGF.

[75] The EFCA is in charge of coordinating cooperation on risk assessment.

In addition, in the reporting period, the Commission continued to promote risk assessment in the field of maritime-transport security. In particular, it focused on the crucial sector of passenger ships, and issued a study and a comprehensive analysis on ferry security. Based on those, the Commission also proposed ways to jointly strengthen preparedness, response and mitigation of risks in this area. Moreover, the newly proposed Customs control equipment instrument[76], allowing MS to purchase detection equipment to reinforce the efficiency of controls in Border Crossing Points, including ports, would also contribute to enhancing their capabilities for risk management. Furthermore, the Commission carried out on the implementation of the Customs risk management strategy Action Plan[77], strengthening MS cooperation in this field.

D. Reports show a focus on **developing and implementing innovative risk-analysis techniques** to increase assessment and response capacity.

MS reported on capability acquisition[78] and on projects developing advanced (automatic) analysis and risk-assessment systems (PT, FR). These advanced systems seek to: (i) distinguish between risk levels and facilitate decision making on possible actions; (ii) support the monitoring and forecasting of coastal ocean weather conditions; or (iii) map the sea floor.

As part of inter-agency cooperation, the agencies launched an exploratory analysis on integrating three different types of risk-assessment reports produced by each agency: (i) the strategic risk assessments for fisheries produced by the EFCA; (ii) the incident reports on illegal border crossings and smuggling of goods produced by Frontex; and (iii) assessments of the likelihood of oil spills produced by the EMSA's CleanSeaNet. Different maps were therefore developed for the Mediterranean Sea by plotting the different data or information from the three agencies.

Through the MIC-RAN network, Frontex has also developed a specialised maritime analytical capability. This capability can support: operational/strategic early warnings, risk alerts, risk profiles, overview reports, area/port analysis, and mapping of EU/regional maritime risks. The capability includes a maritime-intelligence function that generates actionable knowledge and provides effective foresight and warnings to improve global maritime awareness. This will help prevent and monitor transnational threats.

The Commission has also promoted innovative tools (i.e. the EU vulnerability-assessment tool for border control[79]) and information services enabled by EU systems and voluntary networks[80] to support maritime communities conduct risk assessment.

The Commission, with the support of EMSA, has also collaborated on a tool that constructs maps of ship-traffic density[81] in European seas under the Human Activities portal of the

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[76] Instrument for financial support for customs control equipment
https://www.europarl.europa.eu/committees/en/product-details/20190510CDT02882. The proposal is part of the future Integrated Border Management Fund.
[77] https://ec.europa.eu/taxation_customs/general-information-customs/customs-risk-management/priorities-eu-strategy-action-plan-customs-risk-management_en
[78] For example, Portugal acquired container-control scanners equipped with X-ray technology mentioned above.
[79] The EU Vulnerability Assessment Tool offers training on its use for operators of public spaces, including ferry ports or companies, to assess and address their vulnerabilities against terrorist attacks.
[80] With the support of the Commission and EU agencies, work on developing risk-assessment services to be exchanged through CISE began in the CISE transitional phase.

European Marine Observation and Data Network (EMODNET). The new tool is highly valuable for risk assessment in the field of maritime security, maritime safety, and maritime spatial planning.

Activities initiated or planned in the reporting period

Many activities reported by MS and EU bodies began in the reporting period but will end in the next reporting period. Some of these are described below:

- MS' participation in PESCO capability projects such as MUSAS and HARMSPRO. These projects aim to: (i) develop increased command-and-control capabilities for maritime unmanned systems; and (ii) integrate multiple assets and sensors to counter asymmetric threats to naval forces, infrastructure and shipping. The active participation of MS in Horizon 2020 projects[82] also seeks to develop specific capabilities to increase detection capabilities for CBRN-E risks. (PT, FR, PT, ES, IT, PL).
- As part of the inter-agency cooperation on CGF, the three agencies (EFCA, Frontex and EMSA) began work in 2019 on ways to integrate their respective analytical products. This work is expected to greatly benefit their cooperation and the MS authorities they directly support.
- MIC-RAN was created in 2019 by Frontex. It has already started its network activities and supports a closer cooperation between maritime border authorities. It is also working on expanding maritime risk-analysis capabilities directed at cross-border crime. MIC-RAN also supports EU cooperation in CGF. It has great potential to increase: (i) the exchange of maritime-intelligence products and cross-border crime statistics; and (ii) the dissemination of risk-analysis products.

2.5 EDUCATION AND TRAINING

Reporting entities (countries and EU bodies):

- MS: HR, FI, IT, PT, LT, MT, ES, BE, RO, PL
- EU institutions, bodies and agencies: Commission, EEAS, Frontex, EFCA and EDA

Achievements and progress (by theme) emerging from reports across all actions

A. **Knowledge and skill-development on EU maritime security continues to be promoted** to cope with the increasing demand for maritime security. Many dedicated training courses are offered by MS at national level and many conferences are held at regional levelContributions pointed out that there is now a comprehensive approach to education and training, with courses ranging from basic to advanced at different decision-making levels. Curricula address the whole spectrum of governmental activities from military to civilian, and include the different coast guard missions. Curricula also address the requirements of the private sector(ES, FI, LT, MT).

The ECGFF continues to be a catalyst for cooperation. Reports (from ES, FI, IT, LT, MT, PT, Frontex, EFCA, EMSA, CEPOL) widely acknowledge the success of the European Coast Guard Functions Academy's training-network project (ECGFA NET) in harmonising training

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[81] https://www.emodnet-humanactivities.eu/view-data.php

[82] i.e. COSMIC, C-BORD STAIR4, SECURITY, TERRIFIC and BIWAS.

relevant to CGF at European level. ECGFA NET supports inter-agency cooperation at EU level, but it also seeks to improve interoperability and cooperation among national authorities carrying out CGF. The ECGFA NET project, which received funding from Commission services (MARE), is expected to have a significant impact by promoting operational coordination, maritime governance, and wider sharing of existing operational tools and systems. The third phase of ECGFA NET ran from June 2018 to August 2019 under Finnish leadership. During this phase, ECGFA NET finalised: (i) the concepts of knowledge and skills needed for CGF professionals; and (ii) the relevant standard qualification framework, using guidelines from stakeholders and EU agencies. These two references already form the core of a possible future European CGF curriculum, with some CGF items already included in the Frontex common core curriculum. The ECGFA NET project also connected a network of European CGF academies and training institutions, which should foster cooperation and the exchange of best practices at European level. A second pilot exchange programme was organised with the involvement of neighbouring countries to support regional cooperation. The final report of the ECGFA NET is expected to be delivered in the coming months.

Following the termination of ECGFA NET in 2019, the three agencies involved in the inter-agency cooperation on CGF committed to build on the outcomes of the project through possible joint training. This joint training would be based on a sectoral qualification framework for CGF, as well as through an exchange programme and a training portal. The three agencies are currently discussing specific ways to follow-up on these plans. The three agencies also continue to support general education and training objectives, as highlighted during their drafting of the *Practical handbook on European cooperation on coast guard functions*. Additionally, a training catalogue has been created that is available to MS stakeholders and covers all training from the three agencies across all maritime domains.

The EDA Project Team Naval Training continued its efforts in harmonizing requirements in the field of diving training, as well as exchange of lessons learnt in this field.

A maritime-academy network has emerged, helped by the teaching of several maritime courses under the European Security and Defence College. A group of six naval academies are now working on the content of an international naval semester as part of the Military Erasmus programme.

B. Reports put strong **emphasis on sectoral and cross-sectoral exercises at national, regional and EU level in the maritime domain.** The goal of these exercises is to ensure the effectiveness of common procedures, increase common tactics, and foster interoperability. Beyond traditional CGF, the exercises also addressed more specific maritime challenges such as piracy, terrorism and cyber attacks (BE, HR, LT, MT, PL, PT, RO).

The COASTEX 19 exercise was held in June 2019 as part of the ECGFF under Italian leadership. The exercise had a high level of participation, involving several MS. It also had the support of the EFCA, EMSA and Frontex. COASTEX 19 was mentioned by several MS and EU agencies as a key event that promoted the MMO concept and tested interoperability between air and naval assets.

The EFCA continued to provide training on fisheries control and the fight against IUU fishing. In 2018 and 2019, there were several cross-sectoral training sessions that had been developed by the EMSA and EFCA. The training addressed safety for fishing vessels and brought together their respective MS communities.

The joint pilot training on the Coordination of Law Enforcement and Navy Actions in Maritime Border Security took place in the premises of the NATO-Maritime Interdiction Operational Training Centre in spring 2019. This training, co-organised by Frontex and the EDA, provided law-enforcement and navy officers with skills to handle mixed migration flows in a coordinated manner. Based on the feedback received and lessons learned, Frontex and the EDA agreed to carry on their cooperation through a second pilot course.

Safety and security continue to be an important focus of the exercises conducted at regional level. France, Italy, and Spain conducted many exercises under the tripartite agreement Search And Rescue Mediterraneo Occidentale to coordinate procedures for the rescue of damaged aircraft.

C. **The development of digital skills in the maritime domain: a crucial concern**. All stakeholders at national, regional and EU level carried out initiatives to address cyber challenges with digital tools. Among these initiatives, the setting up of a permanent ECGFF working group (on cyber-attack prevention in the maritime domain) will develop technical detection solutions as well as an IT security concept for ships. It will also foster the emergence of a European network of coast guards against cyber attacks (IT, LT, MT, PT, RO).

EU institutions and agencies continue to work to identify and support the development of the necessary digital skills, in particular for cybersecurity, to benefit MS and in line with the NIS Directive (Commission, EEAS, EDA, Frontex).

In November 2019, ENISA organised a workshop on strengthening the cybersecurity of EU ports. The workshop was hosted by the EMSA in Lisbon and brought together over 60 stakeholders from the EU maritime sector. Another relevant workshop was co-organised by DG MOVE and DG CNECT in September 2019 focusing on the cybersecurity aspects of the maritime sector in relation to the NIS Directive. The aim of this workshop was to: (i) take stock of the implementation of the EU framework for cybersecurity; (ii) present ongoing sectoral initiatives; and (iii) exchange views on possible next steps. An equally important objective was to bring the different communities – those working on safety and those working on cybersecurity – to the same table. The workshop brought together representatives from: (i) national authorities responsible for transport safety and security; (ii) national authorities responsible for the implementation of the NIS Directive at national level; (iii) EU institutions; and (iv) relevant EU agencies (ENISA, EMSA). In addition, industry representatives were welcome to participate and share their concerns about sectoral aspects of cybersecurity.

The Commission (DG MOVE) continues to bring different transport communities together to share experiences on cybersecurity, particularly with respect to the coordination of the NIS Directive implementation in the maritime sector also through cyber-security workshops with the participation of EMSA and ENISA. For example, it organised a table-top exercise in March 2019 in Lisbon at EMSA to explore best practices to advance maritime cyber-security.

D. **Cooperation with NATO Centres of Excellence was pursued** by both MS and EU institutions and agencies. Frontex has developed cooperation with NATO's Maritime Interdiction Operational Training Centre, and is exploring further opportunities such as cross-participation in each other's training courses. Closer interaction with NATO also took place as part of the EU HEX-ML18 (PACE) crisis-response exercise (EU lead).

On specific issues, MS (including ES) are also cooperating with relevant international organisations, for example with the International Atomic Energy Agency on nuclear and radiological threats to ports.

Several initiatives were directed at capacity building in non-EU countries, in particular through their participation in national, regional (including under the '5+5' initiative) or EU-level exercises and training. These include exercises and training offered by EU maritime agencies, with the financial support of the Commission services (DEVCO) (FI, ES, IT, MT, RO, EFCA).

Activities initiated or planned in the reporting period

Building on the ECGFA NET project, planned follow-up initiatives include: (i) a European curriculum on CGF; (ii) joint training sessions based on a sectoral qualification framework on CGF; (iii) exchange programmes; and (iv) a training portal. The three agencies involved in inter-agency cooperation on CGF will also build on the outcomes of the ECGFA NET project to support national authorities. The initiatives will seek to benefit from the newly established network of European CGF academies and training institutions, further fostering cooperation and the exchange of best practices (FI, Frontex).

Looking ahead, there is another project to develop a specific training programme in Italy for personnel to be deployed with the future European Border and Coast Guard Standing Corps.

3. PART B - REGIONAL AND GLOBAL MARITIME AFFAIRS

This part of the action plan was introduced in 2018 in order to identify actions on maritime security carried out at the regional level. Entities that reported are:

- EU Member States: IT, BE, MT, HR, ES, FI, PT, RO, LT, FR, PL

- EU institutions, bodies and agencies: Commission, EEAS, Frontex, EFCA and EDA

In the European sea basins, cooperation on maritime security has either been started in some domains or strengthened in others through many different activities.

Overall, reporting by MS and EU entities emphasised the many regional activities aimed at **consolidating civil-military cooperation on search and rescue** (IT, BE, HR, ES, FI, PT, LT, PL). This cooperation included: (i) the development of dedicated information-exchange mechanisms; (ii) participation in national, regional and international exercises and training; (iii) pooling of resources; and (iv) the implementation of common procedures and contingency plans. In addition, a search-and-rescue stakeholder workshop was held in Greece in September 2019 to share best practices and conduct operational training.

In the **Mediterranean**, the WestMED strategy has been identified as an important framework for regional cooperation on maritime security and supporting good governance (FR, MT, and Commission). The strategy has significant potential to support future maritime capacity-building activities and strengthen relations with north African countries in this area. In this context, the EFCA project to develop a regional training academy on fighting IUU was praised (FR, EFCA).

Another important driver for cooperation in the Mediterranean has been the overall cooperation on CGF. Reports highlighted the participation of MS and EU institutions and agencies in regional activities performed under both the ECGFF and Mediterranean Coast Guard Functions Forum[83] (PT, FR, IT, HR, ES, Commission[84], EU agencies). The overall aim of these fora is to share experiences, best practices, risk analysis and threat information. They also discussed the development of common operational rules and mechanisms for regional information sharing.

The reports also mention the usefulness of the COASTEX[85] exercises and of the consolidated cooperation between the three EU agencies taking part in the Coast Guard Function for strengthening regional cooperation in the Mediterranean. The EFCA and Frontex highlighted the development of a common standard operational procedure for the exchange of information between both agencies during the deployment of the EFCA's chartered operational patrolling vessel[86] in the Mediterranean Sea. These two agencies also highlighted the signature of an interinstitutional framework contract for aerial services for borders surveillance and CGF. The EFCA and Frontex also increased their mutual cooperation on information exchange in this area.

MS reported a number of regional, maritime capacity-building activities to support north African countries (ES, PT, IT, FR). These activities were developed as part of European[87] and regional initiatives[88] and/or national bilateral cooperation programmes. The activities included training and/or provision of equipment for: (i) search and rescue; (ii) countering migrant smuggling, trafficking in human beings and other illicit trafficking activities; (iii) maritime interdiction operations; (iv) ship damage control; (v) maritime communications; (vi) maritime surveillance and (vii) medical care.

MS referred to improved coordination between regional centres and the Emergency Response Coordination Centre (ERCC) on pollution control (ES). They also reported on agreements to set up mandatory ship-reporting systems in the Bonifacio Strait (IT and FR) and on difficulties in implementing CISE-enabled exchanges in the area (IT, PT, FR).

Cooperation under EU projects such as MEDEA[89], ECGFA NET[90], PANORAMED[91] and OCEAN 2020[92] aimed to: (i) increase consistency between regional initiatives; and (ii) create

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[83] France co-chaired the Mediterranean Coast Guard Functions Forum with Morocco in 2018 and 2019. France also has the chair of the ECGFF in 2020. IT chaired the ECGFF in 2019 and gave good impetus to the forum's cooperation activities, while Croatia will take over the next chairmanship.

[84] The Commission has continued to support the activities of the European and Mediterranean CGF fora with dedicated annual grants managed by the rotating chairs of these fora.

[85] Exercises carried out in 2018 and 2019 by several national authorities and EU agencies performing CGF (EFCA, EMSA and Frontex).

[86] The EFCA operational patrolling vessel has been operating in EU and international waters of the Mediterranean Sea 6 months per year in line with common fisheries policy rules and as part of the EFCA's JDP in the Mediterranean Sea to monitor fisheries.

[87] Such as the European project Support to Integrated Border and Migration Management in Libya (SIBMMIL). Led by Italy, SIBMMIL facilitates capacity-building activities to support the Libyan authorities, focusing on: (i) search-and-rescue to safeguard human life at sea; and (ii) countering illicit trafficking of human beings and other illicit trafficking activities.

[88] i.e. the 5+5 Initiative - https://www.5plus5defence.org/.

[89] MEDEA is an EU-funded coordination-and-support-action project aimed at establishing and consolidating a regional network of security practitioners in the Mediterranean and the Black Sea region.

[90]

https://www.raja.fi/download/78284_Summary_report_of_the_ECGFA_NET_project.pdf?916791a09732d788

a common picture of maritime areas through data sharing, both on board military ships and in an operational control room in Brussels, using both the CISE and MARSUR networks (FR, IT, PT).

Maritime operations conducted in the Mediterranean region have been another important driver for cooperation. Reports showcased the CSDP's operation EUNAVFOR MED Sophia and its coordination with NATO's Operation Sea Guardian (EDA, HR, IT[93], ES, PT, PL, Frontex, EEAS) which fostered operational coordination on situational awareness and risk analysis. The operation also facilitated the establishment of liaison elements and of logistical support at sea and on land and improved information sharing to support border control and prevent terrorism.

Reporting entities also highlighted dedicated joint activities to increase cooperation on countering migrant smuggling and other illicit activities in the Mediterranean including through participation to Frontex permanent joint operations[94]. Finally, MS implemented national coordination mechanisms and plans, involving civil and military authorities at operational, strategic and political level. These mechanisms and plans: (i) supported the overall EU response to the migration crisis; (ii) strengthened the national and regional response to this crisis; and (iii) aligned these responses with international partners (ES, PT, IT).

Cooperation in the **Adriatic-Ionian** sea basin has been mainly focusing on coordinating the response to the migration crisis and monitoring of maritime traffic.

The ADRION initiative[95] facilitated the development of common technical agreements for naval cooperation, interoperability, and information exchange between MS (HR). Agreements were signed between regional countries around the Adriatic and Ionian on sharing maritime-traffic information[96], while bilateral cooperation facilitated the exchange of experience in maritime-security operations (HR).

As part of the EU strategy for the Adriatic and Ionian region[97], the Commission has supported closer regional cooperation on maritime security by encouraging projects and actions in specific fields. These fields include: (i) safer, more efficient and cleaner ships; (ii) research platforms for marine robotics, ROVs, AUVs, and seabed-related technologies (such as underwater scooters) for safer dives; and (iii) underwater georeferenced information.

Another regional cooperation initiative in the Adriatic Sea was the IPA 2017 Sea Gate project. The foremost task of this project is to enhance international cooperation between the law-

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[91] https://governance.interreg-med.eu/

[92] https://ocean2020.eu/

[93] The Italian navy, as lead nation in EUNAVFORMED's Operation Sophia, supported all the significant opportunities to foster interoperability and strengthen mutual support with Sea Guardian and other partners in the field of maritime situational awareness within the Mediterranean Sea.

[94] Indalo (coordinated by Spain), Themis (by Italy), Poseidon (by Greece) and JAD PONTUS (co-led by Portugal and the EFCA) aimed to: (i) perform border surveillance; (ii) contribute to SAR; (iii) support migration management; and (iv) prevent and detect cross-border crime.

[95] Adriatic–Ionian Cooperation Initiative established by the Ancona Declaration.

[96] For example, Italy concluded agreements with Slovenia, Croatia, Montenegro and Albania to set up a mandatory ship-reporting system in the Adriatic Sea – ADRIREP. The system makes it possible to share information at cross-border level to improve maritime security.

[97] The EU strategy for the Adriatic and Ionian Region (EUSAIR) is a macro-regional strategy endorsed by the European Council (2014). https://www.adriatic-ionian.eu/about-eusair/.

enforcement authorities involved in the fight against illicit trafficking in the Adriatic Sea. The project follow-up is being planned.

Moreover, improving maritime awareness in the Adriatic-Ionian region is one of the objectives of the PESCO project Upgrade of Maritime Surveillance.

In the **Black Sea**, cooperation was promoted mainly under the framework of the Black Sea Synergy initiative. The Commission and EEAS helped the coastal countries – Bulgaria, Georgia, Romania, the Russian Federation, Turkey, Ukraine and Moldova – to progressively increase their cooperation on maritime affairs and tackle common challenges following a regional, sustainable, blue-economy approach. In this regard, priorities and actions have been drawn up. These include: (i) sustainable and safe shipping; (ii) the implementation of relevant IMO instruments; (iii) smart connectivity; and (iv) digitalisation of ports and infrastructure. These actions address maritime security in the region through themes such as: (i) blue skills; (ii) maritime training; (iii) dealing with natural and man-made disasters; and (iv) promoting the study, monitoring and exchange of marine and maritime data (RO, Commission).

In addition, the Common Maritime Agenda for the Black Sea aims at fostering multi-stakeholder dialogue, awareness raising, and the identification of national and regional R&D projects on issues such as maritime surveillance and secure and safe shipping. Two regional workshops were held in 2019 (in Istanbul and Varna) dedicated to the EU's strategic research and innovation agenda[98] for the Black Sea. The workshops facilitated the gathering of researchers from the marine and maritime sectors (RO). The agenda will receive support from an EU assistance mechanism.

Romania reported its actions to strengthen cooperation among Black Sea coastal states on the protection and preservation of the marine ecosystem. Cooperation among the Black Sea coastal states was consolidated by the Black Sea Cooperation Forum (BSCF), through which two virtual exercises exchanged data and information. The data and information were exchanged through the AIES (automatic information-exchange system) application and sought to strengthen the safety and security of ship traffic. In addition, the Annual Meeting of the Border Police/Coast Guard Chiefs from the Black Sea coastal states and two working groups were held in 2019.

As part of the inter-agency cooperation on CGF, Frontex conducted in May 2019 an operation dedicated to implement the MMO concept in cooperation with Romania, Bulgaria, EFCA and EMSA. Its objective was to: (i) strengthen maritime situational awareness; (ii) tackle cross-border crime and illegal migration in the Black Sea; and (iii) fight illegal fishing.

The European project EU-ACT[99] supported the foundation of the Black Sea Prosecutors Network, which facilitates both informal and formal judicial collaboration against heroin trafficking. EU-ACT also facilitated trans-regional Black Sea training exercises designed to improve collaborative judicial responses to heroin trafficking and tackle serious organised crime syndicates involved in it.

In the Baltic Sea, the Commission continued to support the efforts of coastal countries to implement the EU strategy for the Baltic Sea region (EUSBSR) as a means to strengthen

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[98] The strategic research and innovation agendas (SRIAs) are research priorities identified and funded by the EU. The SRIA for the Black Sea can fund national and regional R&D projects.

[99] https://eu-act.info/

regional cooperation. As part of the strategy, the Commission supported the "Policy Area Safe" objective and its set of flagship projects dedicated to: (i) reduce the risks of maritime accidents and marine pollution; (ii) survey shipping routes; (iii) improve new technology; and (iv) increase emergency preparedness.

Reports made reference to activities to foster cooperation on CGF in the Baltic Sea. Authorities from all the Baltic Sea region states performed joint surveillance operations, and national coordination centres were established to intensify information exchange between authorities involved in the Baltic Sea Region Border Control Cooperation forum (FI, LT, PL).

MS participated in cooperation activities and joint exercises focused on fighting pollution at national, regional (through the Helsinki Commission - HELCOM) and EU level. These exercises included the Balex Delta and ChemSAR Livex exercises, addressing oil and chemical pollution (FI, LT). Coastal MS also reported actions to: (i) strengthen security cooperation in different fora; and (ii) set up regional agreements to support interoperability, naval cooperation, and the exchange of maritime information (FI, LT, PL). Poland also highlighted its participation in: (i) the Baltic Sea task force on combating organised crime; and (ii) the Baltic Tracking maritime operation aimed at enhancing both regional cooperation on maritime situational awareness and the fight against crime at sea.

Under the inter-agency cooperation on CGF, the EFCA, EMSA and Frontex were also involved in the Baltic Sea Region Border Control Cooperation. Their involvement was especially strong during the Baltic Tracking exercise in May and June 2019.

Another important subject of cooperation in the region is unexploded munitions dumped at sea. MS reported stronger cooperation, both trilateral (FI, LT, PL) and with NATO, on mine-clearance and ordnance-disposal operations. They also reported on the organisation of awareness-raising events about the environmental effects of this form of marine pollution (FI, PT, LT, PL).

In the **North Sea,** the drive to end the dumping of chemical munitions and unexploded ordnance has also triggered regional cooperation. Under the EMFF, the Commission has supported the launch of two European R&D projects addressing this important subject[100].

In the **Atlantic**, there was also cooperation between MS, relevant agencies, partner countries and relevant international organisations to combat illicit activities in the maritime domain. To support this, the European Commission issued in 2020 a revised Atlantic action plan linked to the Atlantic maritime strategy, which includes concrete actions to fight marine pollution and improve coastal resilience against the effects of climate change. Effective risk management of spills and their impacts requires further cross-sectoral cooperation and work at regional level. In addition, the Commission renewed the funding of the MAOC(N) for an additional 3 years period under the 2018 annual work program of the Internal Security Fund – Police (ISF-P).

Participation in joint activities carried out by NATO also helped to improve cooperation in the northern part of the Atlantic Ocean, the North Sea and the Baltic Sea. Exercises were conducted to maintain a high degree of readiness to respond to crisis situations. These

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[100] As part of the EMFF's 2018 Blue Economy call (Blue Labs topic), two projects were launched in 2019 to address the elimination of sea-dumped chemical munitions and unexploded ordnance in the North Sea: BASTA and Explotect. BASTA creates new detection tools and methods, using a multi-sensor approach combined with artificial intelligence for data-acquisition techniques. Explotect is developing an innovative approach to detect dissolved explosive compounds and chemical warfare agents in seawater.

exercises focused on: (i) monitoring navigation to identify suspicious behaviour; (ii) interventions at sea; and (iii) evacuation of populations (PL).

Outside European sea basins, the EU's strategic efforts have continued to focus on a number of key maritime regions.

In the **wider Atlantic area**, EU institutions and MS actively participated in NACGF[101] activities. Reports underlined that work carried out in the NACGF allowed transatlantic and non-EU partners to gain insight on the cooperation activities of the EU agencies on CGF (Commission, BE, ES, PT, Frontex, EFCA).

On maritime-security cooperation, the EU and several MS have been involved in actions to combat illicit activities in the Atlantic Ocean. These actions have included missions/operations and support/funding for regional actors and the MAOC(N). MS reported on their participation in the MAOC(N) through liaison officers and cooperation with the Centre de Coordination pour la Lutte Anti-Drogue en Méditerranée, the French-based organisation for preventing drug trafficking in the Mediterranean (IT, FR, ES). MS also reported on their involvement in the fight against drug trafficking in the Caribbean Sea with dedicated maritime and aerial equipment and cross-border cooperation (FR, NL, ES). SEACOP, an EU-funded project to support the fight against maritime illicit trafficking and associated criminal networks in targeted countries in Latin America, the Caribbean and Africa, also contributed to seizures by MAOC(N) [102] (Commission).

In the Gulf of Guinea, the EU's involvement to promote maritime security remained significant. In line with the Gulf of Guinea strategy, EU institutions and MS continued to support the Yaoundé architecture through various initiatives and by working closely with individual countries, the regional political organisations (the Economic Community of West African States and the Economic Community of Central African States) and other international players. This work focused on developing regional maritime security and regional maritime governance through information sharing and capacity building. For example, the EU supports several ongoing capacity-building initiatives, such as SWAIMS, which remain critically important to tackle the region's complex and wide-ranging maritime-security challenges, in particular organised crime (EEAS, Commission).

The EU and several MS have been active members of the G7++ FoGG Group since its inception. The EU took part in the 2018 annual meeting of the G7++ FoGG Group co-chaired by the Ivory Coast and Canada, which brought together representatives of many countries and organisations. In 2019, the annual plenary meeting of the G7++ FoGG took place in Brussels with the support of the EU. Co-chaired by the Deputy-Ministers of Defence of France and Ghana, the meeting brought together more than 160 participants from 21 countries and 9 international organisations. The participants agreed to ensure the operationalisation of the Yaoundé architecture (Commission, EEAS, FR, EFCA). EFCA participation made it possible to identify synergies, for example by organising joint monitoring campaigns and training events with the UNODC.

The Commission and EFCA have been addressing IUU fishing activities in the Gulf of Guinea by supporting capacity-building activities for: (i) monitoring, surveillance and control;

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[101] Chaired by Belgium and Germany during the reporting period. Spain will assume the NACGF presidency in October 2020.
[102] SEACOP contributed to the seizure of more than 10 tonnes of cocaine, 1.9 tonnes of cannabis and US $1 050 000 linked to drug trafficking.

and (ii) fisheries development/governance. Since 2018, EU agencies have provided technical support[103] to the Sub-Regional Fisheries Commission (SRFC), the Fisheries Committee for the Western Central Gulf of Guinea (FCWC), and to member countries of these organisations. For instance, these agencies took part in: (i) control operations organised in the area; (ii) training activities on fisheries control and inspection; and (iii) courses on the use in fisheries control of VMS, AIS, radio communications, and other new technologies such as satellite imagery. The EFCA also participated in a Commission-led capacity-building initiative for staff in the Liberian Fishery Monitoring Center. The SRFC organised three joint control campaigns during 2019, and the EFCA participated in all of them as an observer (Commission, EFCA).

MS supported maritime security in the Gulf of Guinea through the deployment of naval ships and bilateral agreements or programmes with regional coastal states. MS also engaged in cooperation activities based on training, capacity building, port calls, and participation in international exercises[104] in the Gulf of Guinea (FR, IT, PT, ES). All of these cooperation activities helped to develop the capabilities of local states and foster the exchange of information with maritime-security centres. MS have also given EU assistance to east African countries, such as Mauritania, Senegal, Guinea Bissau and Cape Verde, in particular on irregular migration flows (ES under the EU project Blue-Sahel). Through bilateral agreements, MS took part in activities to build capacity and assist navies and coastguards in the countries of the region. They also promoted the EUMSS in international events on maritime security[105] (ES).

In the Indian Ocean, the EU remains actively engaged in supporting maritime security, in particular off the coast of the Horn of Africa. The EUNAVFOR Operation Atalanta has been extended until December 2020 with its mandate remaining mainly focused on counter-piracy, but increasingly covering other maritime illicit activities.

The EU continued to scale up operational capabilities and capacity in the Indian Ocean region. Its general objective has been to help coastal states to build capacity through a cooperative approach and thus address piracy and other maritime-security challenges, such as drugs/arms trafficking, illegal fishing and environmental damage. By resorting to various complementary capacity-building programmes, the EU helped beneficiary countries to improve both:

(i)   maritime-domain awareness (the MASE programme and the CRIMARIO project);
(ii)   maritime security, safety of navigation and port security across the Horn of Africa and Indian Ocean regions (see the "Port Security and Safety of Navigation in Eastern and Southern Africa and the Indian Ocean" programme and the "Regional Programme for maritime security in the Red Sea area").

The MASE programme has made important steps towards strengthening the maritime-security architecture of the western Indian Ocean by supporting the establishment of two key regional institutions: the Regional Maritime Information Fusion Centre based in Madagascar, and the Regional Centre for Operational Coordination based in the Seychelles. Both centres are

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[103] In the context of the project for improved regional fisheries governance in western Africa (PESCAO).
[104] Such as the Mar Aberto initiative (Portugal), MEGALOPS III in June 2019 (France), GRAND AFRICAN NEMO in October 2019, and the US-sponsored exercise Obangame Express 2018.
[105] The Maritime Security Conference in Abuja (Nigeria) in October 2019, and the Annual Gulf of Guinea Chiefs of the Naval Staff Symposium held in Paris in October 2018 and in Accra (Ghana) in November 2019.

operational and work in tandem to improve regional maritime-domain awareness and facilitate regional operational/response capacities at sea.

At the same time, the EU-funded CRIMARIO project helped several beneficiary countries in the Indian Ocean and eastern and southern African regions to develop maritime awareness by using an online platform for information sharing and incident management called IORIS, which became operational in September 2018. IORIS enables participant countries to set up a collaborative working environment, improve their understanding of the maritime domain, and coordinate emergency and rescue operations at sea. IORIS served as the main communication platform between participants during the US-led 2019 Cutlass Express exercise, where 18 navies from east Africa, the western Indian Ocean, Europe and the United States trained to spot, raid, and search ships during simulations in the waters of the Indian Ocean (EEAS and Commission).

MS have also continued to expand their cooperation activities in the Indian Ocean. France helps Djibouti, Madagascar and the Seychelles to develop coastal surveillance and intervention capacity. It also supports the maritime regional coordination centre based in Seychelles and the regional centre for the fusion of maritime information based in Madagascar. In 2019, France appointed a new *coopérant* (national liaison officer) in Ethiopia to help national authorities to develop their naval capacities. MS are actively involved in international and regional fora dealing with maritime security in the Indian Ocean, such as the Indian Ocean Naval Symposium or the Indian Ocean Rim Association, where they promote the EUMSS and give visibility to EU action (FR, ES, IT). Since 2016, the Spanish navy has been part of the Indian Ocean Naval Symposium as an observer, establishing direct contacts with navies and promoting maritime security and the visibility of European navies. In 2019, Italy became a dialogue partner of the Indian Ocean Rim Association.

DG MOVE closely followed the development of maritime-security incidents in the Gulf of Aden and Gulf of Oman and reported on these to the MARSEC Regulatory Committee[106].

For the **Indian and Pacific Oceans**, the EU continued its work to implement the commitments laid out in its global security strategy, mainly on east and southeast Asia. For example, the EU continued to support initiatives such as the Regional Cooperation Agreement on Combating Piracy and Armed Robbery against Ships in Asia (ReCAAP). To improve regional maritime multilateralism through the ASEAN Regional Forum (ARF), the EU co-chaired with Vietnam and Australia the Inter-Sessional Meeting on maritime security and two workshops on maritime security held in Vietnam in March and November 2019 (EEAS). These workshops aimed at implementing ARF ministerial statements on closer cooperation between law-enforcement agencies operating at sea in Asia. They helped to raise awareness among ARF members and share experience about regional challenges such as the implementation of UNCLOS and the preservation of marine biodiversity (EEAS). A security dialogue took place in the second semester of 2019 with Thailand and Vietnam. Maritime security was also the topic of various security dialogues run by the EEAS with partners such as Japan, Indonesia, the Philippines and Singapore (EEAS).

The EU also started to explore how it could engage more concretely in building maritime security in southeast Asia by approaching four countries with which partnerships could be set up in the next few years (Vietnam, the Philippines, Indonesia, and Malaysia). In this regard, Project CRIMARIO II was launched in April 2020 with a budget of EUR 7.5 m and planned

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[106] In meetings held on 7 March 2019, 23 May 2019 and 5 September 2019.

to run from 2020 to 2024. CRIMARIO II will seek to: (i) offer the EU's expertise in maritime security to partner countries in south and southeast Asia; and (ii) develop the EU's strategic approach to maritime security in this region. The EU has also started to discuss options with the contracting parties to ReCAAP to cooperate with the ReCAAP Information Sharing Centre based in Singapore (EEAS, Commission).

The EU continued to develop operational cooperation with India through missions to counter piracy in the Indian Ocean. After an Indian military vessel escorted a World Food Programme ship in December 2018, a French frigate made a port call in Mumbai in January 2019. The frigate hosted a meeting between a high-level EU military delegation and Indian authorities. This event, organised by the EEAS, triggered interest from various navies in the Asia-Pacific region. In September 2019, a bilateral workshop was organised with India on anti-piracy and maritime security. At the initiative of the EEAS, informal technical consultations also took place with India, leading to an EU-India maritime-security dialogue scheduled for 2020. In 2019, the EU (EEAS) invited some of its strategic partners in Asia (India and Japan), as well as other countries, to visit: (i) the European headquarters of EUNAVFOR's Operation Atalanta; and (ii) naval ships engaged in the operation off the Horn of Africa. Several exercises at sea also took place on that occasion.

MS helped to increase the EU's presence in the Indian Ocean by becoming a dialogue partner of the Indian Ocean Rim Association (IORA) in 2019 (IT). Cooperation activities under the IROA framework include developing the blue economy and addressing topics such as: (i) maritime security and safety; (ii) IUU fishing; (iii) blue technologies; (iv) coastal tourism; and (v) renewable energies.

The EU also started to explore the linkages between the environment and maritime security in Asia by sponsoring and co-chairing an ARF workshop in Hanoi in November 2019. The workshop discussed UNCLOS and emerging challenges such as climate change and the preservation of marine biodiversity.

During their presidency of the ACGF from 2017 to 2019, MS carried out a project to improve maritime-safety cooperation in the **Arctic** among coast guard authorities. They also organised two operational search-and-rescue exercises to strengthen coast guard cooperation in Arctic waters (FI).

To contribute to Arctic maritime security, in 2020 an EU Commissioner attended the Arctic Security Roundtable at the Munich Security Conference. The EU promotes international cooperation and participates as an observer in both the Arctic Council's Senior Arctic Official meetings and relevant working groups. The EU was one of the first signatories to ratify the Agreement to Prevent Unregulated High Seas Fisheries in the Central Arctic Ocean in early 2019. The EU (Commission) participated in the first meeting of signatories in May 2019 to formalise a provisional scientific group that will: (i) coordinate the work of scientific experts; and (ii) further develop the joint programme of scientific research and monitoring provided for under the Agreement. The EU hosted the first meeting of this provisional group in February 2020 in Ispra, Italy.

Activities initiated or planned in the reporting period

A strategic review of EUNAVFOR's Operation Atalanta is to be submitted to the Political and Security Committee in 2020. It will seek to reflect the general consensus among MS on the need to: (i) extend the operation; (ii) adjust its mandate; (iii) take into account the growing

interconnection between all types of criminality at sea; and (iv) take into account changes in the region's geopolitical environment (EEAS).

The EU will also extend its capacity-building effort on maritime security to the wider Indian Ocean area by launching the regional programme for maritime security in the Red Sea area[107] and the CRIMARIO II project for the period 2020-2024. Building on the achievements of CRIMARIO I, CRIMARIO II will seek to increase inter-agency cooperation in maritime security at both national and regional level, and will reach new partner countries in the eastern Indian Ocean region, including southeast Asia (EEAS and Commission).

To step up the EU's activities in the region after several years of political dialogues, the EU will be launching two actions in southeast Asia in 2020: the project "Enhancing Security Cooperation in and with Asia" and a project to support maritime confidence building in the South China Sea.

In January 2020, eight MS[108] decided to give their political support to the creation of a naval mission in the Strait of Hormuz called European Maritime Surveillance Mission in the Strait of Hormuz. The objective is to ensure a safe navigational environment through this strategic strait by providing maritime situational awareness, coordination, and information sharing among all stakeholders. Another objective is to serve as a de-confliction mechanism to help defuse tensions in the area.

4. OVERALL ASSESSMENT OF THE COOPERATION STRANDS

Under the principles laid out in the EUMSS (a cross-sectoral approach, functional integrity, respect for rules and principles, and maritime multilateralism), MS, EU institutions and agencies significantly strengthened **cross-sectoral cooperation** (including civil-military) and **cooperation across borders** (cooperation between MS), achieving a number of concrete results. Introduced in the revised action plan, the **CGF workstream** has grown noticeably in scale. CGF has greatly helped cross-sectoral and cross-border cooperation. It has also helped cooperation with and between EU agencies. This chapter provides a non-exhaustive overview of the achievements in these three types of cooperation (cross-sectoral, cross-border, and CGF) for both the horizontal actions (part A) and the actions related to regional and global maritime affairs (part B).

Cross-sectoral cooperation (including civil-civil, civil-military, and military-military)

Adopting a cross-sectoral approach has become crucial in **international cooperation.** The need to ensure consistency between civil and military developments has informed cooperation with non-EU countries by MS and EU institutions and agencies. EU-NATO cooperation has been a solid framework for civil-military and military-military cooperation in the EU's external action on maritime security. Civil-military cooperation appears to be necessary for the EU's action against maritime illicit activities to be effective. This is especially the case in

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[107] The programme for maritime security in the Red Sea aims to improve maritime security, port security, and safety of navigation in the southern Red Sea and Gulf of Aden region. It aims to do this by: (i) developing the capacities of national maritime law-enforcement agencies; and (ii) cooperation and dialogue across the region. The programme should be operational between 2020 and 2025.

[108] France, Germany, Belgium, Denmark, Greece, Italy, the Netherlands and Portugal.

complex situations where multiple interactions with a growing network of international actors are a critical element for success, in particular in the fight against smuggling and trafficking at sea.

Cooperation between authorities – civil-civil, civil-military and military-military – has been strongly promoted in all **maritime-awareness** actions. Cross-sectoral engagement is essential in this area and it usefully complements cooperation across borders. MS and EU institutions and agencies are exchanging more information under various formats, both of a mandatory and/or voluntary nature, thereby consolidating their cooperation. MS also cooperated across sectors by: (i) setting up operational coordination centres, bodies and mechanisms; (ii) performing joint operations, exercises[109], training activities and staff exchanges; and (iii) engaging in EU-funded projects[110]. Because they involved maritime authorities, agencies and external partners at both national and EU level, these activities encouraged cross-sectoral interactions to improve common maritime situational awareness and information exchange.

Cooperation between civil and military actors also improved in **maritime capability development, research and innovation**. At MS level, cross-sectoral coordination has increasingly become an established practice to develop specific capabilities. At EU level, civil and military bodies continued to build synergies in maritime capability development and research. Achievements include the development of RPAS and the "TURTLE" project, which provides for a flexible deep sea monitoring system (PT), and information sharing for greater maritime situational awareness (MT). Joint civil-military efforts are also essential to implement the maritime-research agenda and projects funded under Horizon 2020. While research supported through the latter can finance dual use innovation, it has civilian-only applications (EDA, Commission).

A more consolidated approach to civil-civil, civil-military and military-military cooperation has been adopted to improve **risk awareness and risk management**. In particular, joint exercises between MS and with EU agencies have proven to be a powerful way to promote common responses to maritime-security challenges. These joint exercises help to: (i) implement joint contingency plans, response plans, risk-assessment procedures, and coordination mechanisms; and (ii) share security intelligence between civil and military participants (PT, LT, BE, FI, ES, Frontex, EFCA, EMSA).

Cross-sectoral cooperation on maritime **education and training**, including civil-military interactions, has received considerable attention and has been amply reported under all actions in this area. MS and EU institutions and bodies held many cross-sectoral workshops, training sessions and exercises with both civil and military actors. The areas studied in these education and training events included: search and rescue; maritime safety; law enforcement; cybersecurity in the maritime domain; and the role of the military in maritime security. The success of joint training sessions and exercises, including Guardex 18 and the multifunction maritime COASTEX[111] exercises, is one of the most concrete achievements in this area (IT,

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[109] EUNAVFOR MED, EUNAVFOR Operation Atalanta.
[110] EUCISE2020 project.
[111] COASTEX 19 was attended by several national authorities and EU agencies (EFCA, EMSA and Frontex) performing CGF, and involved 11 naval ships, 2 helicopters, 1 aircraft, and 4 boarding teams. It was an

BE, PT, EEAS, EFCA). Regional tools such as the Baltic Sea Region Border Control Cooperation help improve mutual awareness and coordination (LT).

On **regional and global maritime affairs**, cooperation across sectors on maritime security, including between civil and military authorities, was reported in all the EU sea basins. As mentioned earlier, projects, exercises, and most of the capacity-building initiatives supported by the EU or by regional organisations are based on cross-sectoral coordination in participating countries. In global maritime areas, cooperation with external civil and military actors has been promoted under various frameworks (e.g. EUROMARFOR, and CSDP missions and operations).

<u>**Cooperation across borders**</u> (cooperation between countries)

Closer cooperation across borders has been a key enabler for progress in all areas.

On **international cooperation**, the EU has continued to work with key international partners (notably the UN and NATO) and with regional partners. In this cooperation, the EU has sought to intensify efforts to address maritime-security issues and fight maritime illicit activities such as piracy and drug trafficking. Reports make reference to cross-border cooperation achievements at regional level, particularly in capacity-building initiatives. Examples of such achievements include:

(i)   the IORIS online maritime information-sharing platform, developed in the Indian Ocean by the EU-funded CRIMARIO project and operational since July 2019;

(ii)   the start of operations in two regional maritime centres in the Indian Ocean (i.e. the Maritime Information Fusion Centre in Madagascar and the Operational Coordination Centre in the Seychelles);

(iii)   the EU-funded SEACOP project, dedicated to strengthening cooperation against maritime trafficking among countries along the transatlantic cocaine route, which led to the seizure of several tonnes of cocaine and cannabis as well as large sums of money coming from drug trafficking.

To raise **maritime awareness,** MS actively participated in dedicated activities organised by EU agencies. The agencies' objective was to offer the help of European systems managed by the EMSA, Frontex and EFCA to other national civil and military authorities. Close cross-border cooperation also contributed to the successful completion of dedicated EU projects and joint activities, including the successful launch of the CISE transitional phase.

On maritime **capability, research and innovation**, many MS are contributing to the six maritime projects launched under PESCO[112]. Cross-border research cooperation made progress in the framework of the OCEAN 2020 project, with a first live demonstration in November 2019 involving 9 unmanned assets and 6 naval units (from ES and LT). Cross-

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important opportunity to share common experiences in an international environment, enhancing interoperability between air and naval assets and increasing common training.

[112] The six maritime PESCO projects are: maritime semi-autonomous systems for mine countermeasures (MAS MCM), harbour & maritime surveillance and protection (HARMSPRO), an upgrade of maritime surveillance, a deployable modular underwater intervention capability package (DIVEPACK), the maritime unmanned anti-submarine system (MUSAS), and the European patrol corvette (EPC).

border research cooperation also made progress in support of the EDA's Overarching Strategic Research Agenda developed by Member States in EDA. Intensified cross-border cooperation on **risk awareness and risk management** and **education and training** also bore fruit. The Commission, EEAS and EU agencies all stressed the benefits of the EU's Hybrid Exercise Multilayer 18 (Parallel and Coordinated Exercise), also known as EU HEX-ML 18 (PACE). This exercise focused on risk management and the response at strategic and operational level to common threats. It helped to improve coordination in this area: (i) among EU bodies; (ii) between EU bodies and MS; and (iii) with NATO.

Cooperation on CGF (across MS, with EU agencies and between EU agencies)

Cooperation on CGF has seen a substantial increase in the field of **maritime awareness,** leading to progress across all actions. Under the ECGFF umbrella, new areas for collaborative efforts include unmanned maritime vessels, cybersecurity-related risks, and joint exercises such as COASTEX in 2019. Concrete achievements include: (i) improved arrangements for the exchange of information to support maritime multipurpose activities; (ii) providing aerial surveillance services to MS authorities; and (iii) the development of a handbook on CGF cooperation. These achievements would not have been possible without the substantial efforts of MS in the ECGGF (notably the chairs) and of the EMSA, EFCA and Frontex. The support and guidance provided by the Commission were also essential. Cooperation under the ECGF umbrella also strengthened civil-military cooperation on surveillance and information exchange across sectors and borders.

Renewed impetus for CGF cooperation was reported under **capability development, research and innovation**. MS and EU institutions and agencies successfully conducted several multipurpose operations and exercises (IT, RO, Frontex, EFCA) and defined minimum capacity requirements for sea monitoring and patrol missions (HR).

The COASTEX 19 exercises were of particular relevance to cooperation on CGF and to **risk awareness and risk management** in particular. EU agencies and civil and military authorities from several MS (IT, PT, ES, FR) tested their coordination in multipurpose maritime operations. These operations addressed risks associated with fisheries control; search-and-rescue operations; environmental marine protection; and human trafficking (including illegal immigration).

On maritime **education and training**, MS and EU institutions and agencies praised the role of the ECGFF as a catalyst for cooperation. The establishment of the European Coast Guard Functions Academy Network (ECGFA NET) is a notable achievement and makes possible a more joined-up approach to maritime training and education (FI).

Achievements in CGF cooperation in **regional and global maritime affairs** include: (i) the consolidation of collaboration under the Mediterranean Coast Guard Functions Forum; and (ii) the setting up of cooperation frameworks (such as service-level agreements and standard operational procedures between EU agencies) to carry out joint operations (e.g. EFCA and Frontex coordination in the Mediterranean Sea).

In the Atlantic maritime region, the EFCA provided technical support to the Sub-Regional Fisheries Commission (SRFC), the Fisheries Committee for the Western Central Gulf of

Guinea (FCWC) and their member countries. This support took the form of specific training on fisheries control and several operational cooperation activities under the PESCAO project to improve regional fisheries governance in west Africa. In 2019, the EFCA engaged with countries from the SRFC and the FCWC in several fisheries-monitoring operations and capacity-building activities. These operations and activities included training in fisheries control and inspection, and courses on the use in fisheries monitoring of VMS, AIS, radio communications and satellite imagery (EFCA). In the Arctic, during their presidency of the ACGF from 2017 to 2019, MS carried out a project to improve maritime-safety cooperation among coast guard authorities through education and the sharing of best practices. Two operational search-and-rescue exercises strengthened coast guard cooperation in Arctic waters (FI).

5. CONTRIBUTION TO EU STRATEGIC PRIORITIES MADE BY THE ACTIONS PERFORMED UNDER THE EUMSS ACTION PLAN

5.1 The EU as a global security actor/Promoting Europe's interests and values in the world

Implementing the EUMSS action plan helps consolidate overall maritime security and promote Europe's interests and values in the world, in line with the priorities identified in the EU global strategy on foreign and security policy. The EUMSS action plan therefore contributes to the implementation of the EU global strategy by: (i) strengthening the EU's capacity to act as a security provider in the maritime domain; and (ii) raising the **EU's profile as a global security actor**.

Reports consistently stress a commitment to multilateralism and to a rules-based order at sea through the universal application of UNCLOS. They also demonstrate the comprehensive character of the EU's response to global maritime-security challenges and threats, including, inter alia, humanitarian and rescue tasks, assistance to non-EU partners through capacity building and civil and military missions; and naval operations in crisis areas. Many actions also directly support EU prosperity by sustaining freedom of navigation, protecting international maritime routes strategic to the EU economy, combatting cross-border crime, and promoting sustainable access to the global commons.

Closer cooperation with international partners such as the UN and NATO builds effective multilateralism. This cooperation takes the form of exercises, operations and the implementation of various cooperative mechanisms[113]. Activities to improve interoperability between the surveillance systems of MS, the EU, and non-EU partners contribute to maritime awareness. CSDP missions and operations remain a distinctive element of the EU's

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[113] One example is the SHADE mechanisms for shared awareness and de-escalation of conflicts in which the EU naval operations EUNAVFOR Operation Sophia and EUNAVFOR Operation Atalanta participate in the Mediterranean and the Indian Ocean. For more information:
https://eeas.europa.eu/sites/eeas/files/factsheet_-_eu-nato_maritime_cooperation.pdf

contribution to global security in the maritime domain, through permanent and dissuasive naval presence.

The **EU's international ocean governance** policy is another key example of the EU playing a decisive role in building multilateralism and promoting a partnership approach. Good international ocean governance also means making sure that people working at sea can do so in a secure environment. In line with its global strategy and specific regional policies (e.g. for the Horn of Africa and the Gulf of Guinea), the EU plays a key role as a global maritime security provider. It has mobilised resources to protect against maritime threats such as piracy and human trafficking, reduce maritime accidents, and prevent environmental disasters. Satellite data from the EU's Copernicus programme have been used by EU bodies such as the EMSA and for international search-and-rescue operations at the request of the UN. The implementation of the action plan has also helped to promote the oceans as a global policy priority, ensuring a high level of maritime security not only in EU sea basins but also at global level. The action plan has also encouraged international cooperation with organisations such as the IMO. All these activities are essential in supporting the EU's ambition to lead the way on international ocean governance, as confirmed in the Council conclusions on oceans and seas adopted in November 2019.

The EU has taken ground-breaking steps in the area of security and defence, and made substantial progress in maritime capability development. This has strengthened the EU's ability to take more responsibility as a global security provider. In particular, the reports have highlighted: (i) six ongoing maritime projects under PESCO[114]; and (ii) the OCEAN 2020 project funded under the preparatory action for defence research, one of two precursors for the European Defence Fund. Two maritime-capability priorities were included in the 2018 EU capability development priorities developed in the EDA framework[115]: underwater control contributing to resilience at sea; and naval manoeuvrability.

Research and industrial prioritisation are essential for the future of the EU's defence capabilities and its capacity to act autonomously in this domain. Progress on research, innovation and industry, including through OSRA and KSA, help strengthen the EU's security and defence capacity. The establishment of strong linkages between navies and maritime industrial clusters also foster ongoing research and innovation work in the maritime domain.

In addition, the EU's capacity to act as a critical security actor has been bolstered by the cooperation between MS and EU institutions and agencies (including inter-agency cooperation) to ensure synergies between services and sources of information. These services and sources of information include the EU's SatCen, the Copernicus maritime-surveillance services, the GALILEO system and the EGNOS programme. Digitalising and automating the exchange of information, including through artificial intelligence, promises further progress in this field, and will underpin the EU's ambition to play an effective role in global security.

Forthcoming initiatives such as the Coordinated Maritime Presences concept agreed in 2019 and the European-led Mission Awareness Strait of Hormuz (EMASoH), launched in early 2020 by several MS, are also likely to make a positive contribution. These initiatives will help the EU to: (i) further increase its capacity to act autonomously; (ii) safeguard its own

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[114] For more information please see footnote on page 20 (chapter 2.3)

[115] For more information please see footnote on page 19 (chapter 2.3)

interests; and (iii) act as a security provider in a growing number of maritime areas crucial to the EU and global security.

5.2 Protecting citizens and freedoms

Activities reported under the EUMSS action plan support **the implementation of EU policies and strategies to protect EU citizens and freedoms.** These activities thus helped to defend the fundamental rights and freedoms of EU citizens, as stipulated by the Treaties, by protecting them against existing and potential threats. These activities also uphold the rule of law by guaranteeing that the European fundamental values of freedom, security and prosperity are well protected.

The reported actions directly contributed to ensuring the **integrity of the EU's territory and its external borders**, in line with the specific EU policies in this field[116]. For example, maritime-related policies and legislation[117] issued since 2018 by the Commission have sought to implement: (i) improved mechanisms for cooperation and the exchange of information on maritime surveillance between MS and EU agencies across the EU; and (ii) added-value information services and advanced surveillance tools for the user community, also integrating satellite images. In addition, Frontex and MS maritime authorities reported on their current work to support the implementation of the EBCG Regulation[118] to improve overall functioning and also integrate EUROSUR.

In line with the EU's internal security strategy[119], maritime-security actions performed by MS and EU institutions and agencies in 2018-2019 have also helped **strengthening cooperation in handling irregular migration (at sea), and fighting migrant smuggling and trafficking in human beings**. Among these actions, MS participated in: (i) several border and coast guard operations[120] using both national and Frontex equipment and staff; and (ii) EUNAVFOR MED's Operation Sophia. This participation helped to develop the EU's response to migration challenges and cross-border crime through effective and coordinated cooperation with non-EU countries and partners such as NATO.

On internal security, other actions increased cooperation, information sharing, and the development of common instruments to **strengthen the EU's overall preparedness for – and response to – terrorism and cross-border crime.** Noteworthy examples include:

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[116] For more information, see the Schengen Border Code: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016R0399&from=EN and the Regulation on visas: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32018R1806&from=EN.

[117] For more information on the new EMSWe Regulation, see: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32019R1239&from=EN.
For more information on EUROSUR, see: https://frontex.europa.eu/about-frontex/legal-basis/#:~:text=The%20Eurosur%20Regulation%20has%20been,carries%20revised%20provisions%20on%20EUROSUR.&text=This%20Regulation%20was%20fully%20integrated,(EU)%202019%2F1896.

[118] For more information, see: Regulation (EU) 2019/1896 https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32019R1896&from=EN.

[119] The EU internal security strategy for 2015-2020 aims to tackling the security challenges and threats facing the EU until 2020. For more information, see: http://data.consilium.europa.eu/doc/document/ST-9798-2015-INIT/en/pdf

[120] These notably include the following operations organised by the European Patrols Network: Indalo, Themis, and Poseidon.

(i)	the implementation of improved mechanisms and interoperability solutions between MS maritime-surveillance authorities;
(ii)	the consolidation of permanent reporting on European systems managed by EU agencies (i.e. EMSA – SSN, Frontex – EUROSUR, EFCA – VMS)[121];
(iii)	deeper cooperation between MS and EU agencies on CGF;
(iv)	the development of voluntary networks such as CISE and MARSUR.

The COASTEX 19 exercise, held under the framework of the ECGFF, also helped to share expertise, increase joint training, and identify potential gaps to be addressed in tackling maritime challenges (such as piracy attacks, illegal trafficking and terrorist attacks).

Activities on maritime security have also contributed to improve cooperation and coordination and to **consolidate capacities across the EU to better counter cyber and hybrid threats**. These activities took into account the transposition of the NIS Directive[122] and the future implementation of: (i) the entire EU Cybersecurity Act[123]; (ii) the cyber-defence policy framework[124]; and (iii) the EU joint framework on countering hybrid threats[125]. MS and EU maritime authorities reported activities aimed at ensuring the security of their surveillance systems and exchanges of information so they would be resilient to cyber-attacks and capable of handling classified and sensitive information. The setting up of a permanent ECGFF working group on cyber-attack prevention in the maritime domain was another concrete development that fosters cooperation against cyber-attacks.

EU institutions and agencies support the development of necessary digital skills, in particular on cybersecurity, for the benefit of MS and in line with the NIS Directive. To increase protection against malicious cyber activities and hybrid threats, the development of digital skills in the maritime domain is indispensable.

Many reports detailed efforts at national and EU level to address cyber and hybrid threats through improved risk assessment and better response capacity. MS reported on several initiatives in this domain[126] and highlighted advanced work to create computer-emergency-response teams and develop and implement innovative risk-analysis techniques. Cybersecurity requirements are also being mainstreamed in new projects and regulations, reflecting the increasing concerns about cyber challenges among both governmental and private stakeholders in the maritime domain. Cybersecurity is considered all the more essential since the introduction to the maritime domain of emerging technologies such as autonomous vessels, blockchain, remotely piloted systems, and the internet of things. Close coordination among key stakeholders at national and European level helps to create consistent solutions while taking full advantage of existing initiatives and projects of MS, Commission,

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[121] The consolidation of permanent reporting is facilitated through the implementation of the new EUROSUR Regulation, the new EMSWe Regulation, and Commission Implementing Decision 2018/1986 on fisheries inspection.

[122] For more information, see: https://ec.europa.eu/digital-single-market/en/state-play-transposition-nis-directive.

[123] For more information, see: https://ec.europa.eu/digital-single-market/en/eu-cybersecurity-act.

[124] For more information, see: https://data.consilium.europa.eu/doc/document/ST-14413-2018-INIT/en/pdf#:~:text=The%20EU%20Cyber%20Defence%20Policy%20Framework%20(CDPF)%20supports%20the%20development,legislation%2C%20including%2C%20when%20it%20is.

[125] For more information, see the communication on a joint framework on countering hybrid threats (JOIN/2016/018 final) https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52016JC0018.

[126] (i) the setting up of simulators, expert networks and national and regional centres of excellence; and (ii) the organisation of annual international cybersecurity events and conferences.

EEAS and EDA. Overall, MS wish to ensure that cyber and hybrid threats in the maritime domain are tackled across the board, as highlighted by the dedicated EUMSS Friends of the Presidency meeting held in 2019.

Activities to increase maritime security across the EU have directly increased the **EU's resilience against both natural and man-made disasters**. These activities have complemented and/or consolidated civil-protection and crisis-response cooperation at European level[127].

Reports describe initiatives aimed at improving the response capacity of MS and other bodies to climate-change effects and maritime environmental disasters. Among these initiatives, Italy set up the International Centre for Studies on Climate Change, and Spain issued its national civil-protection strategy.

In addressing maritime-security threats and challenges, the reports underline the desire, at national and EU level, to **consolidate: (i) the overall resilience of the EU's critical infrastructure; (ii) the security of the EU's supply chain; and (iii) the security of containers and strategic goods.** MS and EU institutions and agencies sought to improve their risk-management capacity through: (i) capability development and procurement; (ii) training and education; and (iii) regular joint civil-military missions and exercises. They also reported on current and planned: (i) implementation of EU and updated national legislation; (ii) coordination mechanisms and centres; (iii) common procedures; and (iv) joint contingency and response plans to rapidly react to any challenges/threats to maritime transportation and critical maritime infrastructure.

The reported technological developments in this field (particularly in the area of maritime surveillance, but also in capability development) directly contribute to the **EU digital transformation process**[128]. Efforts by MS and EU bodies to produce and use trustworthy digital technology to better address maritime security, including through R&I, are in line with the main objectives of Europe's digital strategy. These efforts have included activities to promote: interoperability, data standardisation, accessibility, and the secure exchange of information. These efforts thus underpin the functioning of – and cooperation between – EU and national surveillance systems (both: (i) systems created by legislation such as SafeSeaNet and EUROSUR; and (ii) systems created voluntarily such as CISE and MARSUR).

IT tools and ICT interoperability within the field of maritime security greatly help to make the most of the sea's economic potential by driving innovation in this field, reducing investment risk, improving the efficiency of public authorities, and improving governance of the seas and oceans.

5.3 The EU's commitments to address environmental challenges and climate issues (European Green Deal)

Several EU initiatives address the need for Europe to: (i) bolster the protection and conservation of the EU's natural resources; (ii) protect the health and well-being of its citizens

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[127] For more information please see Decision No 1313/2013/EU on a Union Civil Protection Mechanism.
[128] Europe's digital strategy: https://ec.europa.eu/info/sites/info/files/communication-shaping-europes-digital-future-feb2020_en_3.pdf.

from environmental-related risks; and (iii) step up action on the climate challenge. These include the EU strategic agenda for 2019-2024, the European Green Deal[129], and the biodiversity strategy[130]. The actions reported under this heading contribute to the EU's environmental action and commitments in the maritime domain.

On climate, the EU continues to raise the issue of climate change in global events addressing ocean governance. In the draft declaration for the UN ocean conference (still under negotiation), the EU has asked for references to be made to the impacts of climate change on human health and safety. The EU has made it a priority to address the impacts of climate change on oceans, marine ecosystems and biodiversity, and food security. This was reflected in: (i) the IPCC special report on the oceans and cryosphere; and (ii) the 2019 UN consultations on the UNGA Resolutions on Oceans and the Law of the Sea and on Sustainable Fisheries. MS are making renewed efforts in maritime capability development and research in the areas of maritime energy efficiency and reducing maritime greenhouse gas emissions. Two examples of this are the development of specific technology-building-block roadmaps or the Consultation Forum for Sustainable Energy in the Defence and Security Sector.

On the conservation of natural resources and biodiversity, the three agencies involved in inter-agency cooperation on CGF worked together on an exploratory analysis. The analysis assessed the potential benefits of integrating the strategic-risk-assessment outcome for fisheries from the EFCA into incident reports on: (i) illegal border crossings and smuggling of goods (data from Frontex); and (ii) the likelihood of oil spills (from the EMSA's CleanSeaNet). The analysis concluded that this integration might make it possible to map the Mediterranean Sea with these types of data. In addition, the EFCA and MS have been implementing joint deployment plans for fisheries monitoring in different EU and international sea basins to ensure compliance with EU and international fisheries regulations. This has helped protect common natural resources and contributed to UN Sustainable Development Goal 14 on addressing the problems of overfishing and IUU fishing. Sustainable fisheries are also included in regional agendas such as the common maritime agenda for the Black Sea. Capacity building programmes to improve fisheries governance at regional levels (e.g. in west Africa) are also part of the EU's action in this area.

The EU has also helped to improve the quality of the marine environment through its participation in international operations to improve the global response to marine pollution from ships (MS, and EU agencies such as the EFCA, Frontex and Europol). The Commission has collaborated on constructing maps of ship-traffic density in European seas through EMODNET's portal on human activities. EMODNET is of great value to maritime safety, maritime spatial planning, and risk assessment in the field of maritime security.

5.4 EU policy on regional cooperation

Regional cooperation is addressed directly or indirectly by many actions under the EUMSS action plan. Maritime security is simultaneously a function of both global pressures and regional dynamics. For this reason, the EU continues to cooperate actively with regional

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[129] Communication on the European Green Deal - COM/2019/640 final.

[130] EU Biodiversity Strategy for 2030 Bringing nature back into our lives - COM/2020/380 final.

partners to support cooperative regional orders based on international law, sustainable development and lasting access to the global commons.

Reports show that the approach implemented by the EU aims not only to strengthen cooperation with regional partners but also to foster cooperation among and between these partners. Reports depict a wide range of tools for regional cooperation that were implemented by MS and/or EU institutions and agencies. This made possible the EU's cooperative action on maritime security to target selected partners, adapt to regional contexts, and serve specific objectives.

In European sea basins, regional cooperation initiatives are implemented to bring together national, European and non-EU stakeholders. These initiatives increase compliance with marine environmental standards (e.g. in the Black Sea and the Mediterranean) or improve safety and environmental protection (e.g. in the Baltic Sea), thus contributing to the security dimension of European neighbourhood policy. Sustained efforts and achievements have been reported in this area, resulting in stable and regular exchanges between MS at regional level (and in some cases involving non-EU countries).

At the global level, reports show that the Gulf of Guinea and the western Indian Ocean remain priority geographic areas for cooperation on maritime security. In the Gulf of Guinea, in line with the Gulf of Guinea strategy, the EU maintains a high level of engagement to support the implementation of the Yaoundé code of conduct and its related architecture in close cooperation with regional partners (individual countries in the Gulf of Guinea, and regional political organisations such as ECOWAS and ECCAS). Regional cooperation in the Gulf of Guinea region is characterised by a division of labour and coordination with MS. This enables complementarity between projects and greater cumulative effect.

In the western Indian Ocean region, the EU has continued to: (i) engage politically; (ii) support regional initiatives; and (iii) implement significant capacity-building actions to help regional actors shape and strengthen cooperative regional structures for maritime awareness. The EU also continued to strengthen collaboration in the region with other international partners (such as UNODC, Interpol and the IMO) and with industry where appropriate.

Efforts to deepen and expand cooperation with Asian partners, especially through the EU-ASEAN partnership, reflect the EU's growing involvement in maritime security in the wider Indian Ocean and Pacific Ocean. The EU's strategic approach to cooperation with Asian partners on maritime security is based on neutrality and expertise and has consistently sought to improve regional maritime multilateralism. In line with the Council conclusions of 28 May 2018 on deepening security cooperation in and with Asia, the EU is increasingly working with ASEAN regional partners. This work is focused on: (i) better addressing traditional maritime-security issues, such as freedom of navigation and the fight against piracy; (ii) emerging challenges such as climate change and (iii) linkages between the environment and maritime security.

6. CONCLUSIONS

Overall, national authorities and EU institutions and agencies made valuable contributions to the implementation of the EUMSS. Reporting was balanced and substantial across all actions of the action plan, proving the benefit of the 2018 revision, which allowed for more

substantive input from EU institutions and agencies compared to the previous report. As a result, the current report gives a more complete picture of the efforts made across the EU to consolidate maritime security.

Actions under the **international cooperation** chapter of the action plan benefited from the sustained and complementary commitments of EU institutions, EU agencies, and MS on global maritime security. The EU has continued to: (i) strengthen its cooperation with the UN system to uphold key principles for rules-based governance at sea in line with the legal framework laid down by the UNCLOS; and (ii) seek synergies in the maritime domain with strategic partners such as NATO. CSDP naval missions and operations have continued to play an essential role in the EU's external action on maritime security. The EU has strengthened multilateralism as a key aspect of its approach towards maritime security at global and regional level.

In the area of **maritime awareness**, reports reflected efforts made by MS authorities to complement their maritime-surveillance picture by accessing information already existing in other national and European surveillance systems. This approach: (i) avoids the duplication of collecting efforts; (ii) improves the performance of security activities; and (iii) fosters complementarity between different national and European systems.

To facilitate direct, reliable and real-time sharing of information, MS and EU agencies improved the interoperability and interconnectivity of their systems. They also worked to digitalise and automate information exchange across sectors. In addition, they made efforts to better integrate information in legacy systems, which improves the efficiency of the decision-making process and thus the performance of operations at sea. The reports also indicated ongoing preoccupation to develop innovative information services (that are able to aggregate and interpret sets of data) and make the exchange of information more secure. This will make the systems resilient to cyber-attacks and capable of safely handling classified and sensitive information.

As reported by MS and EU bodies, Copernicus programme has played a significant role in most of the actions enhancing maritime awareness, through the inclusion of Earth Observations in the service supply chain, in particular those delivered by EMSA and Frontex, in their role as providers of Copernicus maritime and border surveillance services.

Among the ongoing activities aiming to improve maritime awareness, the CISE transitional phase is considered as having a suitable approach to guarantee complementarity of information exchange between different EU and MS maritime-surveillance systems. Important building blocks to improve maritime awareness are considered as well: (i) the projects under Horizon 2020 and PESCO[131]; (ii) the consolidation of MARSUR; and (iii) the work of EU agencies and MS on both the concept of MMO and the handbook on European cooperation on CGF.

Work on **maritime capability development** under the action plan is now benefiting from the potential offered by EU defence initiatives, notably CARD, PESCO, and the European Defence Fund and its precursor programmes. To inform the development of EU and MS maritime capability, two maritime priorities are included in the 2018 EU capability

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[131] Mainly the OCEAN 2020 project.

development priorities[132] agreed by MS: underwater control contributing to resilience at sea and naval manoeuvrability.

New capability projects have focused on maritime-surveillance, able also to integrate Copernicus Earth Observation services and to complement long-established collaborative projects such as CISE and MARSUR. The underlying research has advanced through national and EU projects and programmes, including OSRA and those funded through Horizon 2020. MS reported progress on **industrial innovation and cooperation**, notably through the establishment and maintenance of strong linkages with maritime industrial clusters, as well as industrial prioritisation work through KSA.

The reporting shows that competent EU and MS maritime authorities are determined to increase their **risk assessment and management** capacity, seeking to ensure the resilience of critical maritime infrastructure, the security of the supply chain and the protection of external maritime borders.

To this end, efforts have focused on consolidating the capacity to address cyber/hybrid threats, climate challenges and maritime environmental disasters by developing and implementing: (i) innovative risk-analysis techniques; (ii) common procedures and methodologies; and (iii) enhanced capabilities for risk management.

In addition, the following activities and initiatives are expected to significantly contribute to this strand of work:

(i)   ongoing participation by MS in dedicated PESCO and Horizon 2020 projects;
(ii)   the work that the EFCA, Frontex and EMSA have initiated under the inter-agency cooperation on CGF on possible integration of their respective analytical products;
(iii)   the Maritime Intelligence Community & Risk Analysis Network created in 2019 by Frontex;
(iv)   the activities of the European Centre of Excellence for Countering Hybrid Threats.

Knowledge development on EU maritime security continues to be promoted through a wide range of dedicated **education and training** at national and regional level. The European Coast Guard Functions Forum (ECGFF) acted as a catalyst for cooperation, with EU maritime agencies exploring ways to follow-up on the ECGFA training network project (ECGFA NET). Copernicus contributed to education and training through courses provided by EMSA to Member States and other relevant stakeholders in the maritime domain. Exercises such as COASTEX ensure the effectiveness of common procedures, improve common tactics, and foster interoperability in the maritime domain.

As provided for by the revised action plan thorough the addition of part B, the report confirms the high level of engagement by MS and EU institutions and agencies in supporting the consolidation of maritime security in **regional and global maritime areas of strategic interest for the EU**. Substantive achievements on cooperation activities were reported in all European sea basins, and particularly in the Mediterranean, Black Sea and Baltic Sea. These achievements include joint operations, common exercises and collaborative-training activities/projects, addressing all aspects of maritime security.

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[132] For more details on the Capability Development Plan and 2018 Capability Development Priorities: https://eda.europa.eu/docs/default-source/eda-publications/eda-brochure-cdp

In maritime areas outside the EU, the Gulf of Guinea and the Indian Ocean remained key to the EU's efforts to increase global maritime security through capacity-building and regional cooperation. The report confirms the EU's ambition to become a more influential player in the wider Indian Ocean, notably in South East Asia.

Services delivered through the Copernicus programme, providing space-born observation for the identification of illegal activities at sea, namely drug smuggling, IUU, oil pollution or counter-piracy activities, contributed to the EU actions to increase global maritime security. Copernicus Maritime Surveillance will continue to be a major contributor to the implementation of the EUMSS AP.

In addition, following up on the recommendations of the second report on implementation of the EUMSS action plan in 2017, this report contains a new dedicated section that details substantive achievements in **civil-military cooperation across sectors and borders.** It underlines, amongst others, **how the cooperation on CGF**, strongly supported by the work of the ECGFF and by EU inter-agency cooperation, has developed exponentially and become a key driver for coordination and collaboration between MS and EU agencies to increase maritime security.

In another novelty, this report shows that many actions under the action plan, while primarily addressing maritime security, also **directly contribute to other EU strategic priorities**[133]. Indeed, collaborative actions for maritime security contribute directly to EU goals such as:

(i)   promoting the EU as a global security provider, including through supporting ocean governance;
(ii)   protecting EU citizens and freedoms, including by supporting the EU's digitalisation process;
(iii)   addressing environmental challenges and climate issues (European Green Deal);
(iv)   enhancing regional cooperation.

Although overall progress has been overwhelmingly positive, a few **shortcomings** appear from the reporting exercise and deserve attention:

Firstly, some actions across the action plan were **less reported on**[134]. The reasons for this may include the reporting of a relevant input under another action, or imprecise wording for some actions.

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[133] EU strategic agenda (2019 – 2024) https://www.consilium.europa.eu/en/eu-strategic-agenda-2019-2024
[134] A.2.11 Improve data exchange and interoperability of EU surveillance systems with systems promoted by the EU Critical Maritime Routes Programme and the Maritime Security (MASE) Programme, and explore ways to improve information sharing with relevant partners, where appropriate.
Action B.2.1 (Mediterranean Sea) Building upon existing regional cooperation initiatives, such as the initiative for the sustainable development of the blue economy in the Western Mediterranean (WestMED Strategy) and the Malta MedFish4Ever Ministerial Declaration on sustainability of Mediterranean fisheries, work towards increased cross-sectorial cooperation, addressing the migration challenges by, inter alia, reinforcing information exchange channels.
B.8.2 Continue to promote UNCLOS, the rule of law and international cooperation in the polar regions in particular, in the context of the Arctic Council's and taking into account the work of the Arctic Coast Guard Forum.
B.7.6 (Indian and Pacific Oceans) Explore the linkages between environment and maritime security in Asia, including addressing the major sources of marine pollution and marine litter affecting the key trading routes and choke points in the Asia Pacific region.

All reports received from Member States and EU bodies followed the online tool exactly, reflecting each specific action of the action plan. However, many of the **reported activities are generic** and go beyond the topic of the specific action plan actions, making it difficult to assess implementation.

Most of the reported activities indicated the period in which they took place. However, many activities **did not contain any dates**. This complicated the assessment work, as progress could not be properly measured.

Introducing the 'Lead Actor/Horizon' column in the revised action plan was very useful, as it pinpointed the authorities involved in each action and encouraged them to report. However, the **'horizon' aspect**, although expressed in many of the action plan actions, did not prove its worth, since no authority reported progress in that regard.

Moreover, the **concept of 'championship'**, even though previously addressed in the dedicated Friends of the Presidency Group, seems to have been understood in very different ways by the various reporting entities (some used it in all reported actions, others used it less and some not at all). For that reason, it was not possible to make a clear assessment of this concept in the report.

Communication on maritime-security activities, at both EU and national level, is still limited. EU citizens should be more aware of the importance of maritime security and of the measures taken by national and EU authorities to consolidate it.

In conclusion, to facilitate future work on implementing the EUMSS action plan, and particularly the reporting, we suggest the following.

- Although there has been substantial progress in implementing the EUMSS action plan, **contributions from all Member States to the reporting exercise** is essential if we are to get a full picture of the effort made in – and by – the EU to consolidate maritime security.

- Although one cannot always separate a specific activity from its context (e.g. the surveillance activity from a maritime operation), **more targeted reporting** could help emphasise the aspects directly related to the specific action of the action plan.

- It is useful to emphasise how the reported actions under the EUMSS action plan **contribute to wider EU strategic priorities and the EU strategic agenda**, enabling policy consistency and constructive synergies.

- The reporting entities should gain a better **understanding of the criteria applicable to the 'championship' concept**, avoid overlapping in their contributions and give a more concrete indication of the dates/periods/deadlines of the reported actions.

- To underline the continuous importance of maritime security for the well-being and overall security of the EU and its MS, Member States are invited to **raise awareness of the EUMSS and EU/ national activities in this field**. Communication material is made available by the Commission, EEAS, EDA and competent EU agencies, which are also seeking to organise and support dedicated communication events.

7. TABLE OF ACRONYMS

ASEAN: Association of Southeast Asian Nations

CBRN-E: Chemical, biological, radiological, nuclear and explosives

CBSD: Capacity Building in Support of Security and Development

CGPCS: Contact Group on Piracy off the Coast of Somalia

CGF: Coast Guard Functions

CISE: Common Information Sharing Environment

COPERNICUS: The European Union Space Observation Programme

CRIMARIO: Critical Maritime Routes Indian Ocean

CSDP: Common Security and Defence Policy

ECCAS: Economic Community of Central African States

ECGFA: European Coast Guard Functions Academy

ECGFF: European Coast Guard Functions Forum

EDA: European Defence Agency

EEAS: European External Action Service

EFCA: European Fisheries Control Agency

EGNOS: European Geostationary Navigation Overlay Service

EMODNET: European Marine Observation and Data Network

EMSA: European Maritime Safety Agency

EMSWe: European Maritime Single Window environment

ENISA: European Union Agency for Network and Information Security

EUMSS: European Union Maritime Security Strategy

EUNAVFOR: European Union-led naval force

EUROSUR: European Border Surveillance System

Frontex: European Border and Coast Guard Agency

GALILEO: European Satellite Navigation System

HELCOM: Baltic Marine Environment Protection Commission

HNS: hazardous and noxious substances

IcSP: Instrument contributing to Stability and Peace

IMO: International Maritime Organisation

ILO: International Labour Organisation

Interpol: International Criminal Police Organisation

IORA: Indian Ocean Rim Association

ISPS Code: International Ship and Port Facility Security Code

ITLOS: International Tribunal for the Law of the Sea

IUU fishing: illegal, unreported and unregulated fishing

MAOC (N): Maritime Analysis and Operations Centre (Narcotics)

MARSUR: Maritime Surveillance project

MASE: Programme to Promote Regional Maritime Security

MedCGFF: Mediterranean Coast Guard Functions Forum

MSA: maritime situational awareness

NACGF: North Atlantic Coast Guard Forum

NIS Directive: Directive concerning measures for a high common level of security of network and information systems across the Union

PESCO: Permanent Structured Cooperation

ReCAAP: Regional Cooperation Agreement on Combating Piracy and Armed Robbery against Ships in Asia

RPAS: Remotely Piloted Aircraft System

SADC: Southern African Development Community

SAR: search-and-rescue activities

SatCen: European Union Satellite Centre

SOLAS: International Convention for the Safety of Life at Sea

UNCLOS: United Nations Convention on the Law of the Sea

UNGA: United Nations General Assembly

UNODC: United Nations Office on Drugs and Crime

WestMED: Western Mediterranean blue economy initiative