



# EMSA

# FACTS & FIGURES

# 2022



**EMSA**

**FACTS & FIGURES**

**2022**





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## FOREWORD

Welcome to EMSA's Facts & Figures publication where we review the activities of the past year. 2022 was particularly special as EMSA turned 20 ! This was the occasion to bring together many of our key stakeholders. For me and for the whole body of EMSA staff, it was extremely rewarding to hear our stakeholders acknowledge and commend the important contribution of the Agency to the increased safety, security and environmental performance of the maritime sector. This certainly boosts our motivation and commitment to continue delivering high-level services. I also want to pay tribute to our stakeholders for their ongoing support and involvement in bringing the Agency to the place where it is today.

On the following pages you will read of our achievements in each of our five strategic areas of action, of which I will highlight here just a few.

In the area of sustainability, the green transition continued to gain momentum. EMSA too continued to support the European Commission in delivering the maritime component of the European Green Deal through the Fit-for-55 package, FuelEU Maritime and the extension of the Emissions Trading Scheme to maritime transport. In 2022 we released and presented our studies on biofuels and ammonia, facilitating the uptake of more environmentally sustainable fuel alternatives.

Our services supported the monitoring of air emissions from shipping. Our THETIS-MRV system continued to gather data on CO<sub>2</sub> emissions from large ships operating in EU waters. And in the case of Sulphur Dioxide, our remotely piloted aircraft were active in areas of high-density traffic, taking some 1 200 measurements from ships and facilitating national authorities enforcing the Sulphur Directive.

Safety is of course central to the Agency's mandate and I welcomed the launch in 2022 of our very first comprehensive overview of maritime safety in the EU. We believe the EMSAFE report will establish itself as a major reference document for all who wish to gain insight into the safety challenges and opportunities facing our sector today. We also looked at the safety aspects of the greening of maritime transport by producing two guidance documents – on Shore-Side Electricity and on the Carriage of Alternatively Fuelled Vehicles in Ro-Ro spaces.

Our satellite-based services for routine and emergency surveillance continued to support a number of stakeholders with various functions at sea. Approximately 1.5 billion km<sup>2</sup> of sea and ocean surface was monitored with more than 16 000 Earth Observation images delivered to coastal states and other accredited users. Over the year, the service was used to support 26 emergencies as part of our contingency plan in cases linked to oil pollution, Search and Rescue, and anti-piracy.

The maritime awareness picture continued to support the efforts of competent authorities to ensure the safety of maritime traffic, assist in improving response to accidents and dangerous situations at sea, and contribute to preventing and detecting pollution by ships. IMS users grew to more than 6 300 individuals and 660 operational bodies.

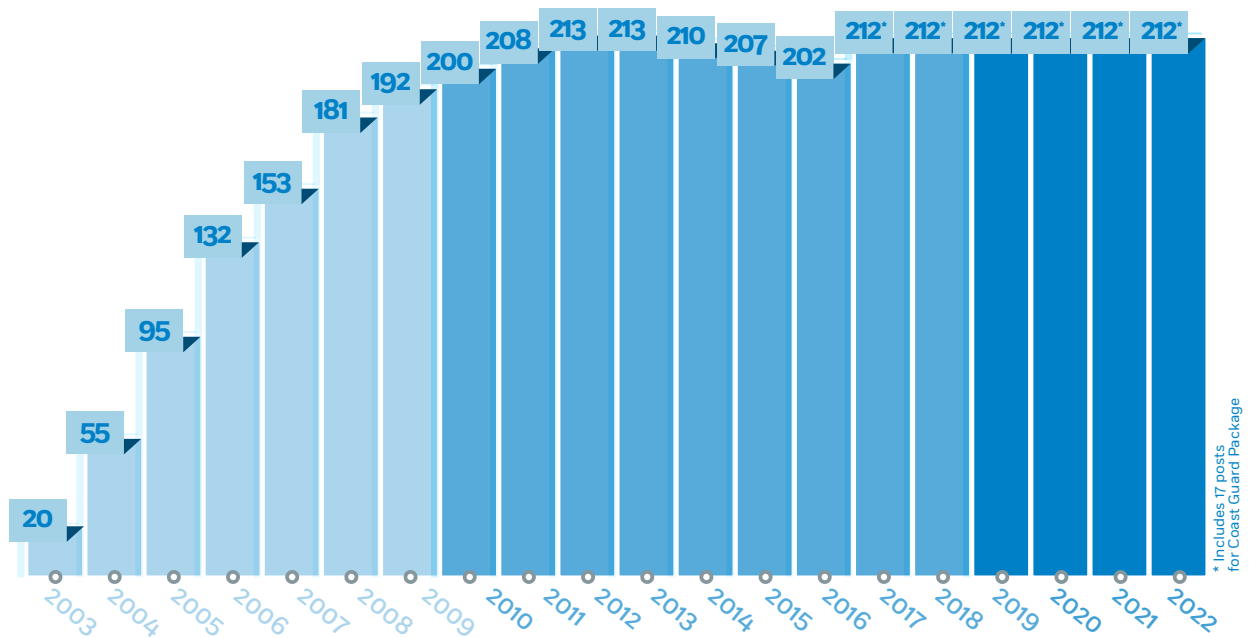
In 2022 the EMSA Academy reached cruising speed. Besides the bulk of presential and online training events, we rolled out our first Common Core Curricula – for Sulphur Inspectors and Flag State Inspectors. We also successfully completed the two technical assistance projects for European neighbourhood countries – SAFEMED and BCSEA and launched their follow-ups.

2022 was another successful year and before closing I would like to thank again the professional and committed staff of the Agency as well as our stakeholders for all that has been achieved.

**Maja Markovčić Kostelac**  
Executive Director

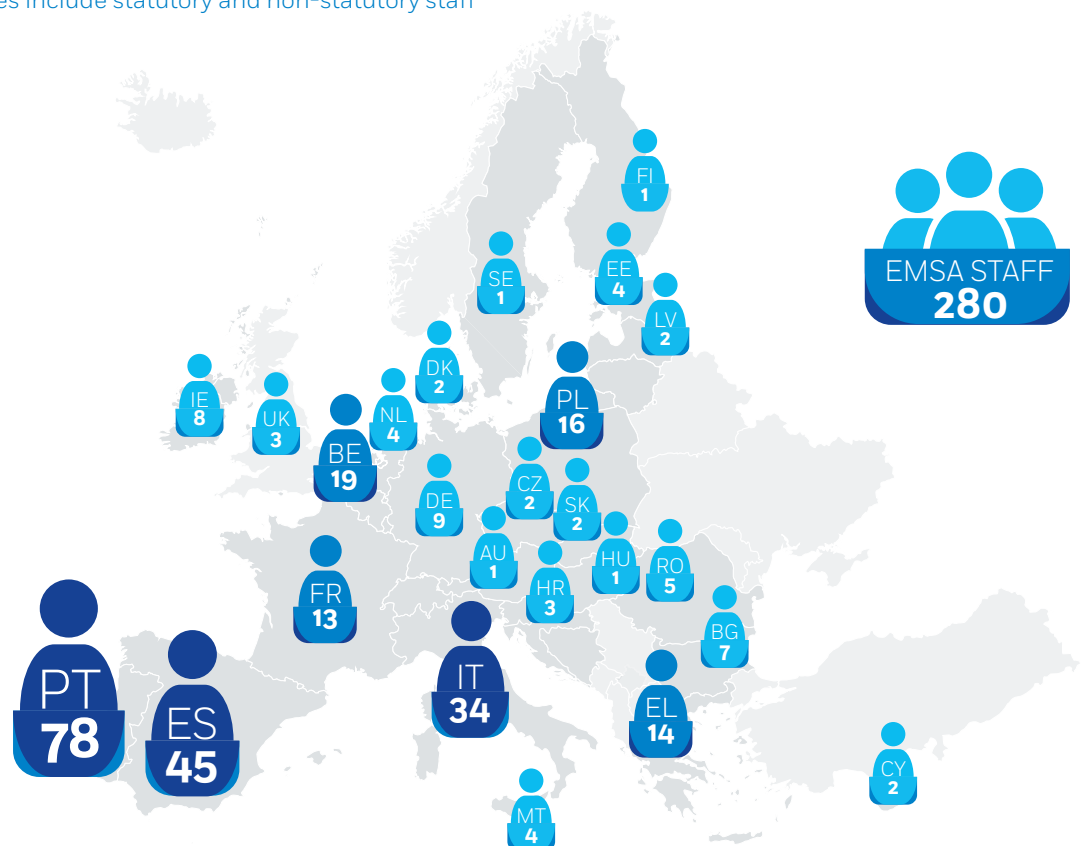
## ESTABLISHMENT PLAN FIGURES

EMSA statutory staff from 2003 to 2022



## EMSA STAFF BY NATIONALITY 2022

Figures include statutory and non-statutory staff





## CHAPTER 1

## SUSTAINABILITY





## CONTRIBUTE TO THE EUROPEAN GREEN AGENDA FOR MARITIME TRANSPORT BY STRENGTHENING THE EU CAPACITY TO PROTECT THE MARINE ENVIRONMENT, MANAGE CLIMATE CHANGE AND RESPOND TO NEW ENVIRONMENTAL CHALLENGES

### PREVENTION OF POLLUTION BY SHIPS

EMSA is actively engaged in helping to reduce the impact of the maritime transport sector on the environment. Throughout 2022, EMSA gave full support to the European Commission on the maritime dimension of the European Green Deal which sets out the EU's ambition to be the first climate-neutral continent, with a far-reaching growth strategy based on a just and inclusive transition.

This support was focused mainly on legislative initiatives linked to the 'Fit for 55 package' such as the FuelEU Maritime proposal and the extension of the Emissions Trading Scheme (ETS) to the maritime transport sector. EMSA worked alongside the European Commission in the preparatory phase and provided technical support for the discussions held at European Parliament and Council level.

The assistance EMSA will provide in relation to the extension of the ETS to maritime transport was formalised through a dedicated Service Level Agreement with the European Commission. Similar assistance was also requested by the European Commission for the implementation of the FuelEU Maritime proposal. This assistance will entail tailored IT systems that EMSA will develop to support the ongoing efforts towards greener maritime shipping.

A series of studies are underway on alternative sources of energy for ships with the objective of acquiring knowledge on different sources of power to inform the uptake of more environmentally sustainable solutions. After the signing of a framework contract, two specific studies on the use of biofuels and ammonia were delivered and presented during a dedicated workshop in October 2022. A further two studies on the use of hydrogen and wind-assisted propulsion were launched at the end of the year and are expected to be delivered in 2023.

EMSA was also involved in close cooperation with the European Commission on other emerging topics relevant to the implementation of the Marine Strategy Framework Directive, such as underwater noise and marine litter. In this respect, EMSA started to participate in the relevant Technical Groups established at EU level and launched work aimed at the delivery of regional sound maps in 2024. This follows the dedicated study published by EMSA in October 2021 entitled 'Sounds: Status of Underwater Noise from Shipping' which consolidated information and put forward recommendations on the topic.

EMSA effectively supported the European Commission and the Member States at the International Maritime Organization (IMO) with active participation in the Marine



Environment Protection Committee (MEPC) and the Pollution Prevention and Response Sub-Committee, assisting in the coordination of documents and providing technical contributions to various IMO submissions, including support on other pollution prevention topics such as the correspondence group on marine plastic litter from ships.

Workshop on alternative fuels (biofuels and ammonia) and power solutions for shipping and ports held at EMSA on 17-18 October 2022

In addition, the Agency has been actively involved in the relevant discussions on short-term measures at IMO aimed at reducing greenhouse gas emissions from shipping. EMSA supported the European Commission in the coordination of the IMO Correspondence Group on carbon intensity which delivered its work at IMO MEPC 78. Furthermore, a new Correspondence Group was set up on fuel lifecycle GHG intensity guidelines to which EMSA was requested to provide substantial support.

The EU MRV Regulation is part of the EU's efforts to include the maritime transport sector in its overall policy to reduce greenhouse gas emissions. In support of this regulation, EMSA developed and hosts the THETIS-MRV system, which supports the monitoring and reporting of verified data on CO<sub>2</sub> emissions by shipping. EMSA supported the European Commission in gathering the data of ships of over 5 000 gross tonnage operating in EU waters. Following the end of the fourth reporting period, EMSA assisted the European Commission in the analysis of emissions data for a report which was published in August 2022 to inform the public and allow for an assessment of CO<sub>2</sub> emissions and the energy efficiency of maritime transport. The continuous implementation of the MRV system is expected to lead to emission reductions of up to 2% compared with a business-as-usual scenario.

In the field of implementation of the Sulphur Directive, EMSA supported the European Commission in the monitoring of the implementation of the 2020 global sulphur cap in the EU. As part of the assistance to Member States in the enforcement of this directive, over 1200 measurements of Sulphur Dioxide emission levels were performed using Remotely Piloted Aircraft Systems (RPAS) from the port of Marseille in France and from three other coastal areas with high density traffic (French Channel, the entry of the Baltic Sea from Germany, Gibraltar Strait from Spain). In addition, the Agency has supported the European Commission in the ongoing work within the Barcelona Convention framework which led to the landmark decision to adopt the Mediterranean Sea as an Emission Control Area at IMO MEPC 79.

Preparatory work also started with the European Environment Agency for the new edition of the European Maritime Transport Environmental Report, expected to be launched in 2024.

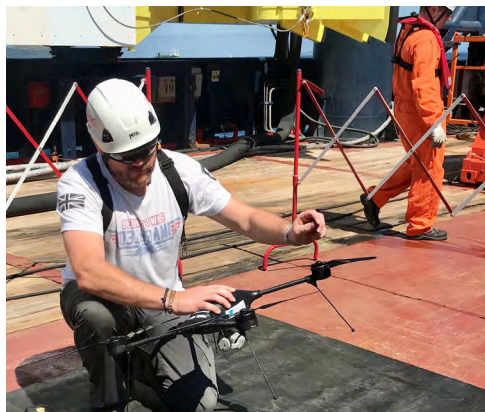


## OPERATIONAL POLLUTION RESPONSE SERVICES

Today, the Agency maintains a fully equipped, and constantly updated, 'toolbox' of pollution response services. This is at the disposal of coastal Member States of the EU to help them deal quickly, effectively and efficiently with oil pollution incidents from ships and offshore oil and gas installations. For chemical incidents, EMSA's MAR-ICE service offers Member States expertise in case of an emergency. These services are also available to third countries sharing a sea basin with the EU.

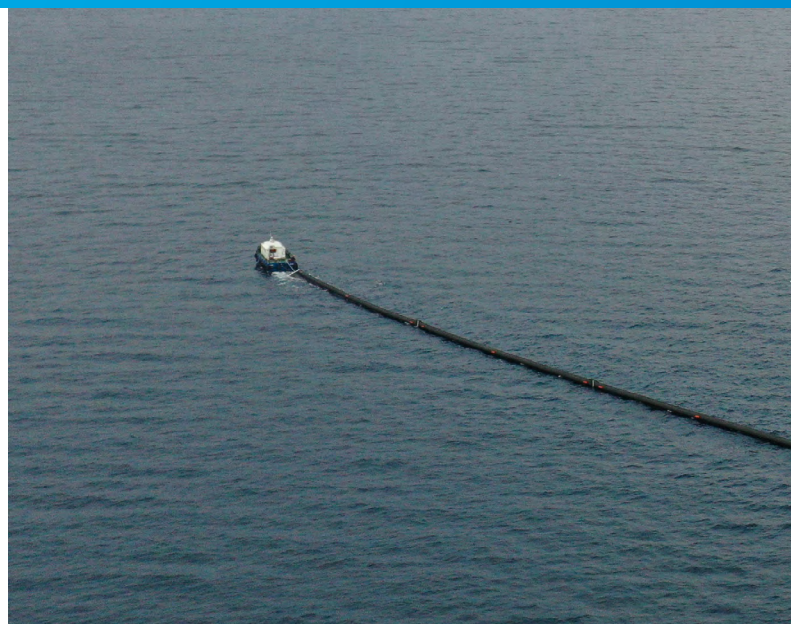
Located around the EU, these services are designed to top-up and complement existing response resources at national and regional level. When a pollution event occurs, Member States can choose the response resources that best fit their needs from a catalogue of services, including a network of 16 oil spill response vessels (equipped for recovery or dispersion of oil), 12 with light Remotely Piloted Aircraft System (RPAS), standalone equipment from one of the five Equipment Assistance Services (EAS) or dispersants from eight stockpiles. Member States may also ask for satellite-based images from CleanSeaNet.

In addition to maintaining and renewing its existing network of oil recovery vessels and the Equipment Assistance Service (EAS), in 2022 the Agency also made available near shore pollution response equipment for response in shallow waters, including working boats, and completed a feasibility study for a software tool to assist in planning the response to a spill. EMSA also continued improving the operational capacities of its vessels by equipping two additional vessels with RPAS capacity.



Images from a quarterly drill involving an EMSA response vessel where the vessel deployed oil spill response equipment, monitored and guided by the EMSA RPAS quadcopter.

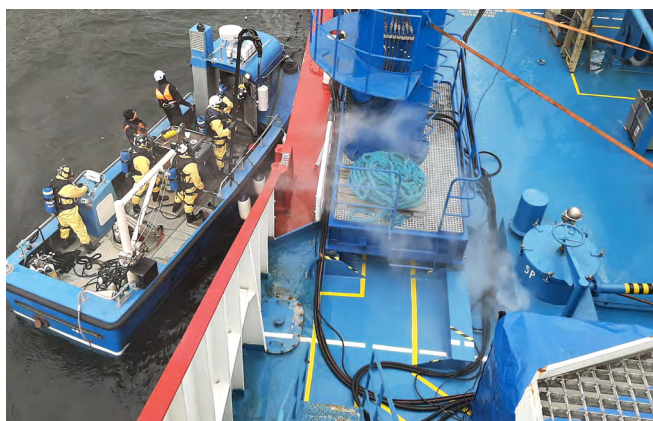




Overall, the services provided for the response to pollution caused by ships, as well as the response to marine pollution caused by oil and gas installations, have become more adaptable and flexible to better reflect regional capacity, requirements and risks. Moreover, nine vessels and two EAS arrangements were deployed in pollution response exercises organised by Member States.

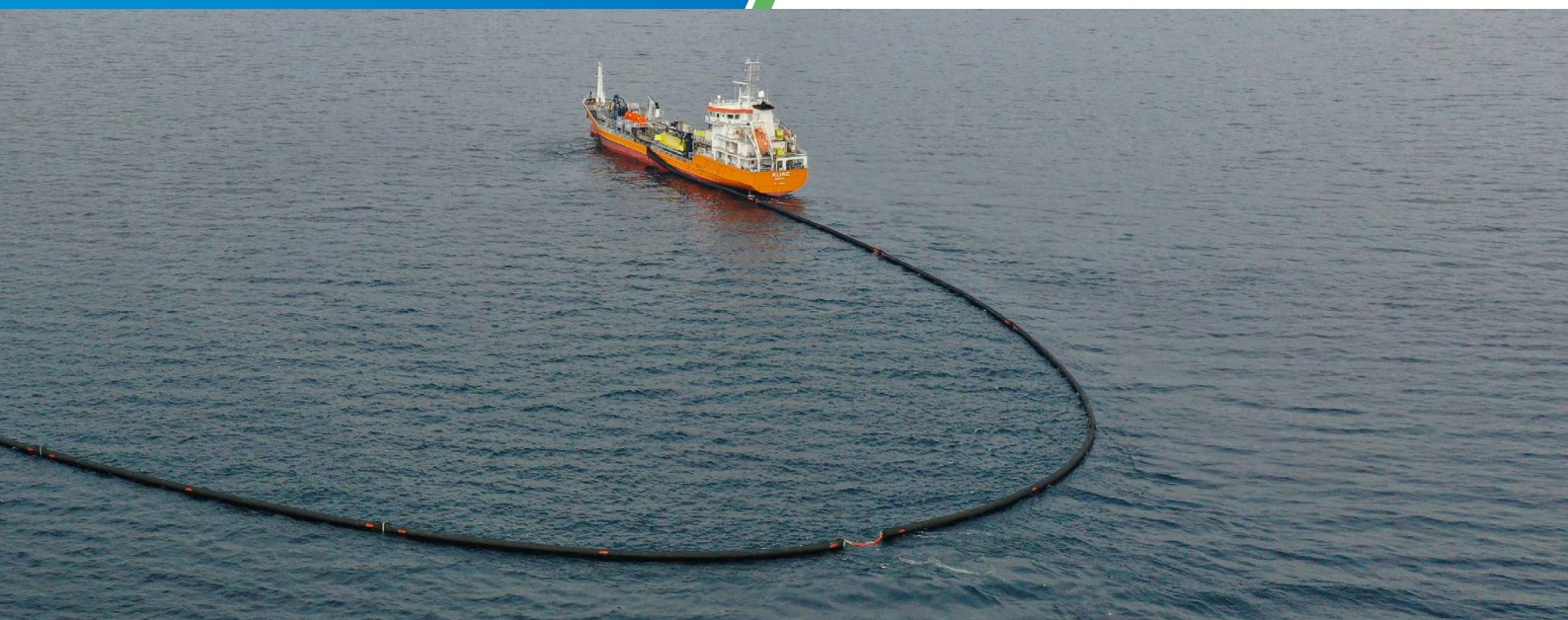
Regarding support to Member States in case of a chemical incident, the MAR-ICE service providing expert information and advice was renewed for another five-year period. This service is gaining momentum with Member States thanks to the newly introduced 'information webinars' which help spread information to response coordinators on how to use the service and what support could be provided. The service was activated by EU Member States' authorities twice for marine pollution incidents and seven times for exercises in 2022. The Marine Chemical Information Sheets (MAR-CIS) were also further updated in 2022.

Pollution preparedness and response priority issues identified by the Member States continued to be addressed, through the Consultative Technical Group for Marine Pollution Preparedness and Response (CTG MPPR). The first workshop on response to an incident involving bulk Hazardous and Noxious Substances (HNS) was held in Brest in September. At the CTG meeting in October, Member States agreed to set up a dedicated correspondence group to define training needs with regards to HNS response.

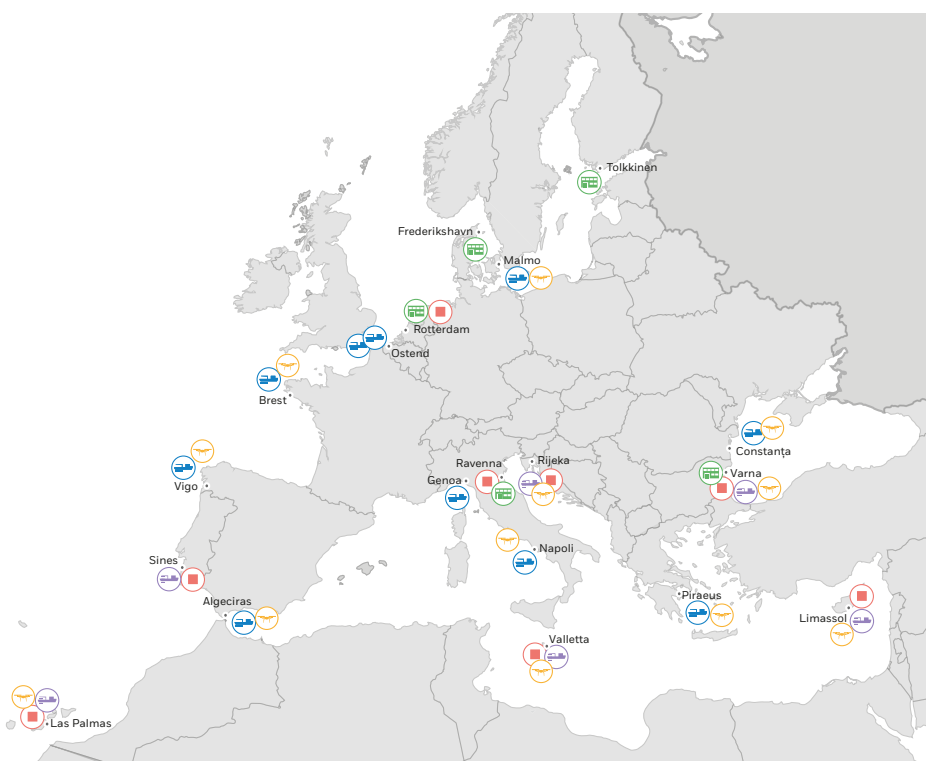
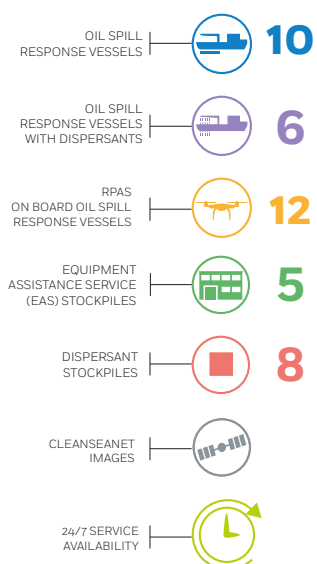


MAR-ICE support for chemical emergencies at sea has been extended until the end of 2027. EMSA will continue to offer this service in cooperation with the European Chemical Industry Council (Cefic) and the Centre for Documentation, Research and Experimentation on Accidental Water Pollution (Cedre).





### Network of EMSA's pollution response services available to the coastal Member States of the EU up until 31 December 2022





## CHAPTER 2

## SURVEILLANCE



## STRENGTHEN EMSA'S ROLE AS THE CORE INFORMATION MANAGEMENT HUB FOR MARITIME SURVEILLANCE

### MULTIPURPOSE MARITIME SURVEILLANCE (RPAS)

EMSA makes available a range of Remotely Piloted Aircraft Systems (RPAS) to assist in the maritime surveillance operations undertaken by Member State authorities involved in Coast Guard functions.

In 2022, the Agency continued to establish itself as a reference in the RPAS civilian domain for multipurpose maritime surveillance applications not only at EU level but also globally. EMSA offered eleven RPAS operations to Member States and relevant EU Agencies, with eight running in parallel. These included Multipurpose Maritime Surveillance operations with a regional focus in the Mediterranean Sea (Italy), Baltic Sea (Finland, Estonia, and Latvia), North Sea (Denmark), North Atlantic (Iceland) and Black Sea (Romania). Additionally, RPAS emission monitoring operations were organised in Germany, France, Spain, and the port of Marseille (light RPAS). Two EFCA vessels were equipped with RPAS capabilities.

In 2022, RPAS services delivered 1 305 operational flight days associated with regional multipurpose deployments, maritime surveillance, emissions monitoring, and support to EU chartered vessels (EMSA for pollution response; EFCA for fisheries control). The RPAS Annual User Group meeting was successfully organised with the presence of Member States, the European Commission, the European Fisheries Control Agency (EFCA), the European Border and Coast Guard Agency (Frontex), the European Union Aviation Safety Agency (EASA) and the Maritime Analysis and Operations Centre – Narcotics (MAOC-N).

EMSA further expanded its RPAS portfolio offered to Member States and EU Agencies by finalising a framework contract for RPAS operations using Vertical Take Off and Landing (VTOL) aircraft, for multipurpose maritime surveillance with medium range and endurance, including operations from vessels. This will provide the Agency with these capabilities for the next four years. Additionally, two preliminary market consultations were launched: one concerning RPAS maritime surveillance services from patrol vessels and another linked with the use of Artificial Intelligence applied to RPAS based sensors.

The existing RPAS portfolio now includes six types of RPAS which can address a wide range of user requirements: VTOL medium size aircraft; VTOL long-range aircraft; middle size fixed wing aircraft; middle size fixed wing aircraft with extended coastal range; and two types of smaller quadcopters for pollution monitoring, multipurpose maritime surveillance, and emissions monitoring.



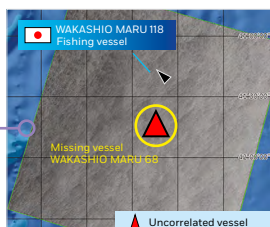


## EARTH OBSERVATION PRODUCTS

EO value-added products offer additional information to satellite images. These can be provided either as a layer on top of the original satellite image or as a separate layer of information. EMSA offers the following products in to supporting search and rescue, specific operations and exercises at sea:

### VESSEL DETECTION

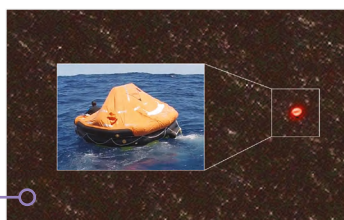
Vessel detections derived from radar and optical images are correlated against vessel reporting information (e.g. T-AIS; SAT-AIS; LRIT and VMS) to provide an overview of which vessels are reporting in a given area, and which are not.



In this image, a non-reporting vessel, corresponding to the FV Wakashio Maru No 68, was detected 300 NM from its last known position after 7 days adrift, during the search and rescue operation.

### FEATURE DETECTION

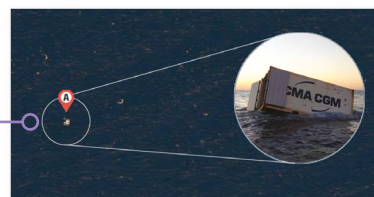
Detects features of interest at sea, in the shoreline and in harbour areas which are not covered by other EO products.



In an exercise with the Portuguese Navy, a drifting life raft was detected in a very-high resolution optical image.

### ACTIVITY DETECTION

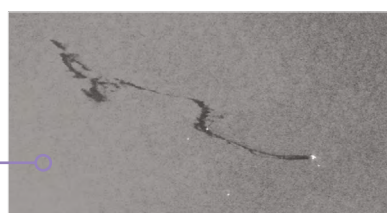
Uses very high-resolution images to report information about activities of interest detected at the sea surface, including search and rescue operations, rendezvous at sea, vessels loitering close to ports or to ship lines.



In the aftermath of the sinking of Grande America, drifting containers were detected in very-high resolution optical images

### OIL SPILL DETECTION

Uses high and medium-resolution radar images and very high-resolution optical images, focusing on oil spill detection and associated pollution source.



An oil spill of large dimensions was detected in a radar image, following the collision of Ulysses and CSL Virginia.

Credits:

© MRCC Reunion, 2021; ESAATG medialab; Epicstockmedia/shutterstock.com; ©Portuguese Navy; Copernicus Sentinel data 2018; ©EMSA 2021, contains modified SPOT-6 & GEOEYE-1 data. All rights reserved. Certain parts are licensed under conditions to EMSA.



## SATELLITE-BASED SERVICES AND SURVEILLANCE INNOVATION

Getting a reliable overview of human activity at sea is a complex and demanding task. The vast areas covered by our oceans resist wide-scale surveillance from the ground, making satellites a reliable, efficient, and cost-effective option for maritime safety, security, and sustainability purposes.

Accessing data from synthetic aperture radar (SAR) and optical satellites, EMSA's Earth Observation services provide a wealth of data for two main EU surveillance programmes – CleanSeaNet, which detects oil spills and potential polluters, and the Copernicus Maritime Surveillance programme, which provides a better awareness of human activity at sea.

In 2022 within the Earth Observation services, over 16 129 images were delivered to Member State administrations and EU institutions in the scope of CleanSeaNet, Copernicus Maritime Surveillance and support to Border Control activities (through the EMSA-Frontex Service Level Agreement) representing over 1.5 billion km<sup>2</sup> of sea surface monitored.

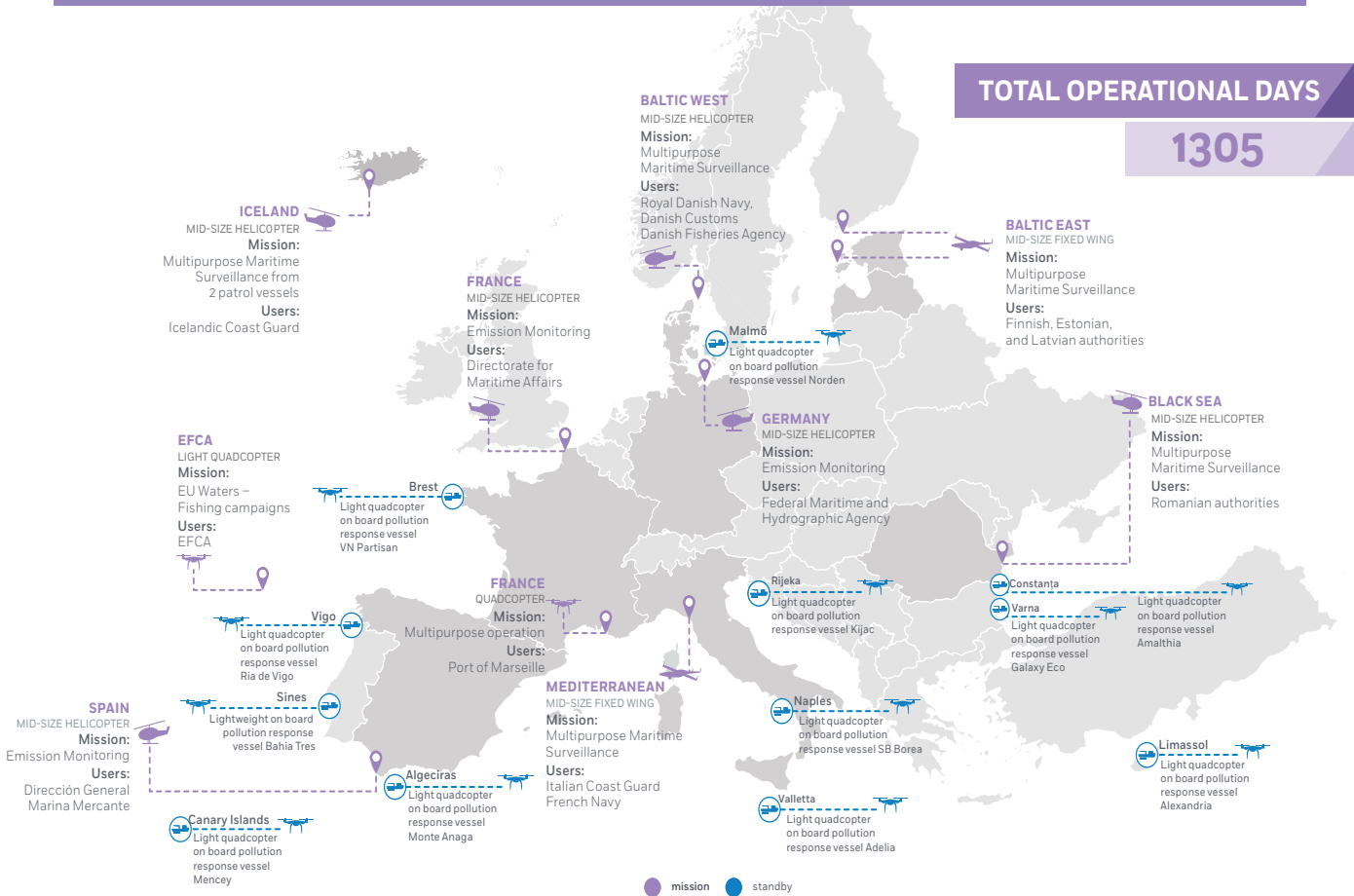
The CleanSeaNet service delivered 6 638 images to Member States. The CleanSeaNet (CSN) annual user group meeting was organised in March with delegations from 22 Member States. CleanSeaNet training activities included four training sessions organised for Member States.

The Copernicus Maritime Surveillance service (CMS) delivered 7 015 images to a wide range of users in different function areas. The number of registered organisations grew, with Copernicus now serving 60 Member State national administrations, European Institutions, and international organisations. The Copernicus Annual User Group was successfully organised attracting 43 participants from twelve Member States, and representatives from the European Commission, EFCA, MAOC-N and the United Nations Office on Drugs and Crime (UNODC).

During 2022, EMSA continued to provide global near to real-time Satellite AIS data services which consisted of approximately 37 million messages per day. EMSA also continued to cooperate closely with the European Space Agency (ESA) on space-based solutions to optimise data communication with global coverage using space-based assets. The Agency participated in a demonstration project with ESA and Norway aimed at testing the satellite component of the new VHF Data Exchange System (VDES). The project demonstrated how digital information between ships and Member States' coastal stations can be exchanged using Norway's NorSat-2 satellite with a VDES test payload through a specific ship on-board equipment and a prototype VDES equipment installed at EMSA.

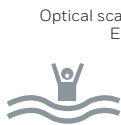
In terms of satellite-based support for emergencies at sea, there were 29 activations of the EMSA contingency plan of which 26 triggered dedicated Earth Observation services, linked with oil pollution, Search and Rescue and anti-piracy.

2022 RPAS OPERATIONS



RPAS IN SUPPORT OF

SEARCH & RESCUE



Optical scanner  
EPIRB  
AIS

EMISSIONS MONITORING



SOx/NOx sniffer  
EO/IR camera  
AIS

TRAFFIC MONITORING



Radar & optical scanner  
EO/IR camera  
AIS

MARINE POLLUTION



EO/IR camera  
Radar  
AIS

FISHERIES CONTROL



Radar & optical scanner  
EO/IR camera  
AIS

TRAFFICKING



Radar & optical scanner  
EO/IR camera  
AIS

RPAS IN ACTION: 2022 EXAMPLES



RPAS flying from on board Icelandic Coast Guard patrol vessel



Regional RPAS deployment in Finland, Estonia and Latvia



RPAS emission monitoring in France

## CISE TRANSITIONAL PHASE

The Common Information Sharing Environment (CISE) is an EU initiative which aims to make European and EU/EEA Member States surveillance systems interoperable to give all concerned authorities from different sectors access to the additional classified and unclassified information they need to conduct missions at sea. The European Commission has put in place a preparatory action for the operational implementation of CISE and has tasked EMSA to set up and coordinate the preparatory actions, known as the transitional phase.

During 2022, EMSA continued to coordinate and chair the CISE Stakeholder Group, which is made up of 28 stakeholders representing various Member States and EU agencies and bodies from all the seven maritime sectors (maritime safety and security, marine environment, fisheries control, customs, border control, law enforcement and defence). During the transitional phase, CISE has to be transformed from an EU research project into an EU-wide operational maritime surveillance information network, giving all EU Member States and EU Agencies the possibility to connect.

### CISE STAKEHOLDER GROUP MEMBERS

- COUNTRIES WITH NOMINATED CSG MEMBERS
- EU INSTITUTIONS, EU SERVICES, AND OTHER INTERNATIONAL ORGANISATIONS
- NODES





## CHAPTER 3

### SAFETY AND SECURITY





**CONTRIBUTE TO HIGHER MARITIME SAFETY STANDARDS, ANTICIPATE NEW MARITIME SAFETY CHALLENGES AND EXPECTATIONS, AND PROVIDE KNOWLEDGE-BASED SOLUTIONS WITH THE AIM OF CONTRIBUTING TO THE REDUCTION OF MARINE CASUALTIES AND HUMAN LOSS.**

**STRENGTHEN MARITIME SECURITY IN EUROPE AND GLOBALLY WHERE THERE IS A EUROPEAN INTEREST.**

.....

## MARITIME SAFETY

Maritime safety has been at the heart of EMSA's activities since its inception and is both foundation and pillar for all its present and future work. The wealth of technical actions that have been carried out by the Agency in relation to the safety of passenger ships, marine equipment, alternative fuels and energy systems for ships, Maritime Autonomous Surface Ships (MASS), steering and manoeuvrability, containership fires, etc., underlines its pivotal role. EMSA's work also addresses emerging trends, potential future risks, and new technologies, in support of the European Commission and the Member States at EU and IMO level.

In 2022, EMSA released the first comprehensive overview of maritime safety in the European Union at the Agency's 20th anniversary conference in June. The European Maritime Safety Report (EMSAFE) combines information from all the databases hosted by EMSA to give detailed insights into the status of maritime safety in the EU. The report benefited from the valuable input provided by maritime stakeholders from across industry associations, national administrations and the European Commission. By looking at the development, application and status of relevant EU and international safety standards, EMSAFE contributes to a greater understanding of the safety-related challenges and opportunities facing the maritime sector.

At EU level, EMSA has continued assisting the European Commission within the framework of the Passenger Ship Safety Expert Group, and by assessing requests for national exemptions to both Directive 98/41/EC and Directive 2009/45/EC on passenger ship safety. Similarly, support was provided on the follow-up, review and feedback on the deliverables from the European Commission's study on Small Passenger Ships, which was finalised at the end of 2022. In addition, EMSA carried out visits, remote and physical, in relation to the implementation of the relevant directives by the Member States.

In relation to the damage stability of ro-ro passenger ships in the EU and, in particular, in the ongoing review of Directive 2003/25/EC, the Agency continued to provide support to the European Commission and Member States resulting in a legal proposal that was discussed by EU legislators in 2022.

In the area of Shore Side Electricity (SSE), and notably Onshore Power Supply (OPS), the Agency published the SSE guidance, covering different safety and standardisation aspects in relation to interoperability and interconnectivity of SSE and OPS for ships at berth. With a focus on the development of best practices for operation, risk assessment and electrical safety, the SSE guidance has collected contributions from several

industry organisations, standardisation bodies, classification societies, the European Commission and Member States. A workshop took place in 2022 with relevant EU ports to present the document which was very well received.

EMSA also published high-level guidance on the carriage of alternative fuelled vehicles (AFV), e.g. electrical cars, on board of ro-ro ships. The Agency coordinated a group of experts from Member States and industry to draft this guidance document.

In 2022, EMSA set up another expert group with more than 80 participants to develop the first guidance on the safe installation of battery energy storage systems onboard. It is expected that the work will be finalised by the end of 2023.

EMSA continued working on Maritime Autonomous Surface Ships (MASS) topics through its dedicated Task Force. Notably, the second part of the risk-based assessment tool for MASS (RBAT MASS) was finalised and presented to Member States and stakeholders through a workshop. The third part of the study commenced in 2022 with the aim to be finished in 2023.

At IMO level, EMSA continued working on the improvement of fire safety onboard ro-ro passenger ships through the IMO Correspondence Group so that the FIRESAFE study findings can be used as a basis to amend SOLAS and other relevant instruments to ensure an appropriate fire safety level for new and existing ships.

In supporting the Member States and the European Commission at the IMO on matters of EU competence, EMSA has had an active participation in various IMO Correspondence Groups including:

- The Life Saving Appliances (LSA) Correspondence Group, where a complete Goal-Based Standards (GBS) revision of SOLAS chapter III and the LSA Code is being performed;
- The complete Goal-Based Standards (GBS) revision of SOLAS Chapter II-1;
- The Fire Protection Working and Correspondence Group where active contributions have been made;
- The International Code of Safety for Ships Using Gases or Other Low-flashpoint Fuels (IGF) Correspondence Group, where work on safety provisions for the use of alternative fuels has been taking place in relation to the development of guidelines for the use of ammonia and hydrogen;
- The Port State Control Correspondence Group, where EMSA was, on behalf of the European Commission, leading the IMO correspondence group on measures to harmonise Port State Control activities and procedures worldwide;
- The MASS Correspondence Group before the development of a non-mandatory Code for Maritime Autonomous Surface Ships.

The IMO has also opened two new outputs on container ship safety, one in relation to fire safety and the other on loss of containers. In 2021, a study on container ship fire safety was launched based on the previous Technical Analysis carried out at EMSA and the work started in 2022 with a view to be finalised in the first quarter of 2023.





This new study, CARGOSAFE, is expected to provide a scientific and technical basis for the IMO discussions to improve fire safety standards of container ships, based on a formal safety assessment.

During 2022, the role of EMSA in the marine equipment domain has been strengthened. In addition to the annual update of the applicable standards for more than three hundred equipment items, the Agency provided support to the European Commission for the update of the mutual recognition agreement with the USA. In 2022, EMSA fostered the use of the e-tag and succeeded in having the first MED equipment e-tagged and presented in Hamburg in September.

The web-based MED Portal has been enhanced and is widely used and recognised by the MED community as the main information source to find MED approved products that can be installed on board EU Member State flagged ships and as the forum for technical discussion on interpretations of the application of standards. The mobile Android version is already available, and the iOS version was released in 2022.

Equasis has greatly contributed to the improvement of maritime safety and the quality of ships by collating and making available information free of charge on the global merchant fleet. Acting as the Management Unit of Equasis, the Agency pursued the objectives of the Equasis 5-year Strategy and, in particular, cooperated with the Tokyo and Paris MoU to formulate a proposal to address the problem of double reporting of Port State Control inspections to Equasis.

In 2022, EMSA hosted the bi-annual desktop exercise on Places of Refuge for ships in need of assistance with participants from different maritime fields, including the European Commission, maritime administrations, classification societies and salvage companies. The successful exercise was based on a scenario prepared by Denmark and led to several lessons learnt.

With regard to Port State Control, EMSA continued supporting the European Commission, Member States and the Paris MoU in providing training for Port State Control Officers, both at entry and refresher level. The Agency also supported the Commission in developing the Impact Assessment for the revision of the Directive 2009/16/EC. The Agency participated and contributed to the Paris MoU meetings including the Port State Control Committee, the MoU Advisory Board and the Technical Evaluation Group. EMSA also led and participated in Paris MoU Task Forces, including one dealing with the pilot project on fishing vessels. Finally, EMSA was part of the team from the Paris MoU that conducted a fact-finding visit to Montenegro as a candidate member to the Paris MoU.

EMSA continued providing support on Directive 2001/96/EC related to the loading and unloading of Bulk Carriers, for which the cycle of visits continued.

Within the European Commission initiative to assess the implementation of Directive 97/70/EC on fishing vessels safety, the Agency has been providing technical support to the Commission's inter-service steering group. In addition, EMSA reviewed and provided technical input to the associated study commissioned on this topic and which is expected to be published in 2023.



The MED Mobile app provides interested parties with up-to-date information on marine equipment by reading the products' e-tags.



## THE HUMAN ELEMENT

The human element is central to safe and effective shipping and a key concern for the Agency. Over the past year, EMSA worked alongside the European Commission and the EU Member States supporting the planned revision of the Standards of Training, Certification and Watchkeeping (STCW) Convention at IMO.

The Agency has also promoted the implementation of the Maritime Labour Convention, 2006, by providing training to ensure compliance and enforcement to both EU Member States and non-EU countries. With regard to training related to STCW implementation, a comprehensive online training on the assessment, examination and certification of seafarers was designed and delivered.

EMSA also continued providing assistance to the European Commission in the framework of the Enhanced Regional EU-ASEAN Dialogue instrument on the implementation of the MLC, 2006 Convention in ASEAN Member States. In this way, EMSA is increasing the knowledge and capacity of ASEAN maritime administrations, improving awareness of seafarers' rights and developing an understanding of the current recruitment and placement system for seafarers.

The STCW Information System developed by EMSA was further enhanced in 2022 with a web-based module. This will provide Member States, stakeholders and other interested parties with a tool where statistics on the number of seafarers holding EU certificates and endorsements can be tailored according to the user's needs. The new module is expected to be made available to the public during the second semester of 2023.

Meanwhile, a Correspondence Group composed of representatives from EU Member States and EMSA completed its work with a view to defining high level business and technical specifications for the establishment of an EU Seafarers' Certification Platform, which aims to facilitate the issue of e-certification for seafarers. The definition of the final business and technical specifications in support of the development of such platform will proceed in 2023.

Finally, a study in support of the identification of competences for Maritime Autonomous Surface Ship (MASS) operators in Remote Control Centres was launched and is expected to be concluded in 2023.



## RECOGNISED ORGANISATIONS

Work with the European Commission and the Member States continued in relation to the monitoring of Recognised Organisations. A workshop with the European Commission and Member States was hosted by EMSA where practical aspects were discussed based on feedback from Member States on their involvement in EMSA's inspections of Recognised Organisations.

Further to previous work, and as a consequence of the adoption by the IMO's Maritime Safety Committee of new input related to regulating remote surveys and audits, EMSA continued to support the EU in preparing and presenting at the IMO's III sub-committee a detailed proposal for regulating this important matter. EMSA is supporting the European Commission by participating in the intersessional correspondence group that has been established to take this work forward.

### SEAFARER STATISTICS IN THE EU






A SNAPSHOT OF THE NUMBER OF SEAFARERS HOLDING CERTIFICATES OF COMPETENCY & ENDORSEMENTS ATTESTING RECOGNITION BY EU COUNTRIES VALID IN 2020, AS REPORTED IN EMSA'S STCW INFORMATION SYSTEM

EU COUNTRIES






**189 278**

MASTERS AND OFFICERS  
CERTIFIED BY EU COUNTRIES

**TOP 5  
EU COUNTRIES WITH THE  
HIGHEST NUMBER OF  
CERTIFIED OFFICERS**

	Greece (22 779)
	Norway (21 404)
	Poland (20 629)
	Croatia (15 324)
	Italy (14 271)

**TOP 5  
EU COUNTRIES WITH MOST  
OFFICERS RECOGNISED  
BY OTHER EU COUNTRIES**

	Poland (9 065)
	Greece (6 660)
	Romania (6 291)
	Croatia (4 488)
	Bulgaria (3 127)

NON-EU COUNTRIES

**127 958**

MASTERS AND OFFICERS FROM  
NON-EU COUNTRIES RECOGNISED  
BY EU COUNTRIES

**TOP 5  
EU COUNTRIES RECOGNISING  
THE HIGHEST NUMBER OF  
NON-EU OFFICERS**

	Malta (54 862)
	Cyprus (23 299)
	Norway (13 324)
	Portugal (12 215)
	The Netherlands (9 361)

**TOP 5  
NON-EU COUNTRIES WITH  
MOST OFFICERS RECOGNISED  
BY EU COUNTRIES**

	Philippines (49 461)
	Ukraine (25 597)
	Russian Federation (17 313)
	India (11 231)
	Turkey (6 091)



Sinking of fishing vessel Aggersøe on 18 July 2021  
Photo credit DMAIB/Denmark

## ACCIDENT INVESTIGATION

EMSA works to further develop the accident investigation capabilities of EU Member States as well as to enhance the collection and analysis of casualty data at EU level. It does this through two main structures: the Permanent Cooperation Framework of Accident Investigation Bodies (AIB), for which EMSA acts as Secretariat; and, the European Maritime Casualty Information Platform (EMCIP) which is populated by the AIB and whose casualty data can subsequently be analysed and contribute to an enhanced safety culture at sea.

EMSA continued providing services as the Secretariat of the Permanent Cooperation Framework and facilitated the technical cooperation between EU Member States AIB which is essential for the proper implementation of the Accident Investigation Directive. The Agency also supported the Permanent Cooperation Framework's activities related to the ongoing impact assessment of the Accident Investigation Directive and led the working group on the 'Integration of Human Element perspective in accident investigation'.

In 2022, EMSA continued managing the European Marine Casualty Information Platform (EMCIP), including its Business Intelligence tool supporting bespoke reports, dashboards, and analytics, based on EMCIP data. EMSA also organised the annual EMCIP Governance Group meeting composed of AIB and Maritime Administrations. The EMCIP Graphical Interface was improved further and a new functionality aimed at using data provided by the EMSA Traffic Density Mapping Service has been implemented.

To bring value to the wealth of data stored in EMCIP, EMSA has applied a dedicated methodology through which the safety of ro-ro ships, fishing vessels and containerships has been analysed. In 2022, the Agency continued with the Safety Analysis of EMCIP data publishing an Analysis of Navigation Accidents (collisions, groundings and contacts).

In 2022, the Agency also published the eighth edition of the annual overview of marine casualties and incidents covering EMCIP derived data for the 2014-2021 period. The publication was further modernised becoming more user friendly in 2022. Through this overview, the Agency presents detailed statistics on marine casualties and incidents involving ships flying a flag of an EU Member State, accidents in the territorial sea and internal waters of Member States or wherever the interests of Member States are involved.

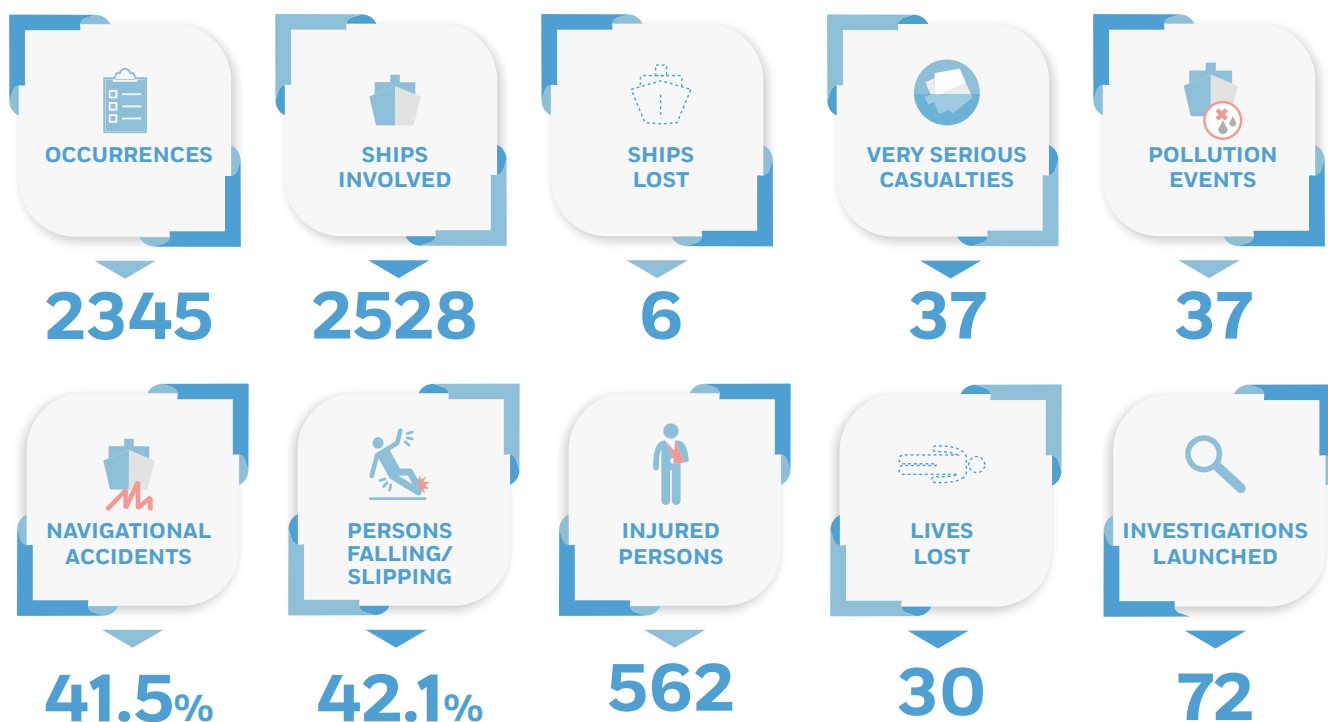
The Agency delivered several training courses (Core Skills for Accident Investigator course, advanced course for Accident Investigator and Voyage Data Recorder course) to investigators of the EU Member States, but also to non-European countries through EU cooperation programmes. Work has been initiated to include the Accident Investigation training activities within the portfolio of the EMSA Academy.

Finally, in this domain, the Agency successfully awarded a contract for a study to detect potential COVID 19-related safety issues and emerging risks contributing to marine casualties and incidents and another contract for the provision of operational support to Accident Investigation Bodies in the area of underwater surveys. Thanks to this latest development, the Agency now offers a new service upon request for underwater surveys using Remotely Operated Vehicles (ROV), thereby strengthening the capacity of Accident Investigation Bodies to conduct safety investigations related to very serious and serious casualties. The service may also be used for other coast guard related activities. The first operational test of the service was successfully conducted in 2022 in the Lisbon port area.

## 2022

### MARITIME CASUALTIES

KEY FIGURES (extracted in January 2023)







## MARITIME SECURITY

Maritime security refers generally to measures taken for protection against unlawful acts such as piracy, armed robbery, terrorism and maritime violence. As the security of the entire maritime transport chain is important, EMSA provides support to the European Commission to monitor the implementation of Regulation (EC) No 725/2004 on enhancing ship and port facility security. In 2022, EMSA provided 23 inspector-weeks to help the European Commission and EFTA Surveillance Authority in assessing and verifying the implementation and enforcement of maritime security legislation in the Member States. The Agency subsequently delivered 47 inspection reports detailing the maritime security measures, procedures and structures in place in the Member States.

In parallel, EMSA continued to support the European Commission and the Member States in various tasks related to the implementation and improvement of EU and international security legislation by participating in the Maritime Security Committee (MARSEC) and the Stakeholders' Advisory Group on Maritime Security (SAGMAS). In 2022, EMSA and the European Commission's Directorate-General for Mobility & Transport (DG MOVE) issued the first updated version of the 'Interim Guidance on Maritime Security for Member States' Competent Authorities' to reflect the experience gained during European Commission Maritime Security inspections and disseminate best practices among Member States. A particular emphasis was put on cybersecurity elements in this new publication.



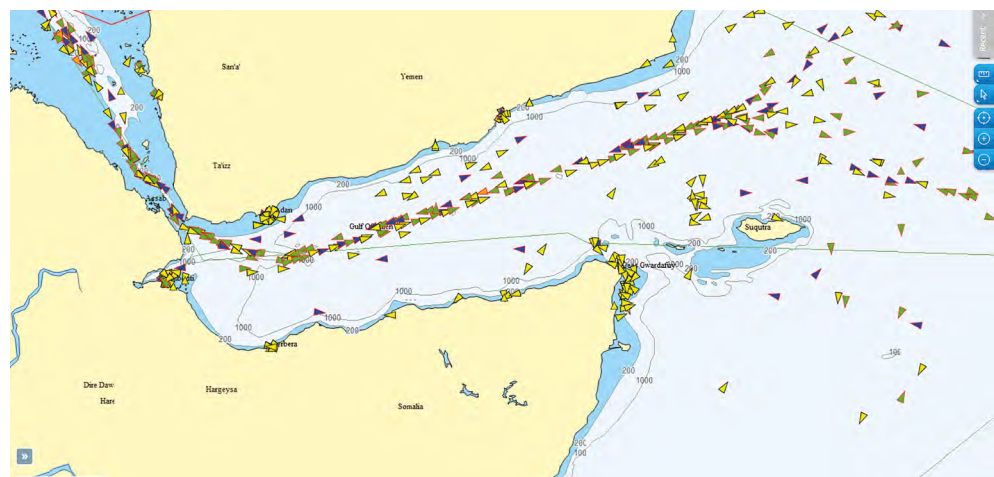




In relation to cybersecurity, and considering the increasing risks posed by cyber-attacks to the maritime domain, EMSA kept on carrying out actions to enhance maritime cybersecurity awareness and information exchange. The Agency participated and notably hosted the second ENISA maritime cybersecurity conference in October 2022.

EMSA also organised its first maritime cybersecurity workshop in December 2022 which gathered participants (in person and online) from EU Member States as well as speakers from the European Commission, the European Union Agency for Cybersecurity (ENISA) and the private maritime sector. The objective of this workshop was to raise awareness on maritime cybersecurity for shipping.

In support of the EU merchant fleet worldwide, EMSA provided a dedicated Integrated Maritime Service (IMS) to EUNAVFOR Somalia's Operation Atalanta. IMS is an essential tool for EUNAVFOR as it provides extensive vessel position/characteristics data in combination with satellite surveillance services in key hotspot areas for piracy and armed robbery, through the Copernicus Maritime Surveillance Service. The collaboration will continue through the new Cooperation Agreement signed in 2021. This support includes the delivery of satellite images in quasi real time in support of Member States' navies operating in the Gulf of Guinea, as well as a routine monitoring provided to EUNAVFOR in the Somali area of operations.



Maritime traffic off the Horn of Africa as displayed in the SafeSeaNet Ecosystem (SEG) on EMSA's IMS platform

## CHAPTER 4

### SIMPLIFICATION





## FACILITATE THE SIMPLIFICATION OF EU SHIPPING BY SUPPORTING EU-WIDE DIGITAL MARITIME SOLUTIONS

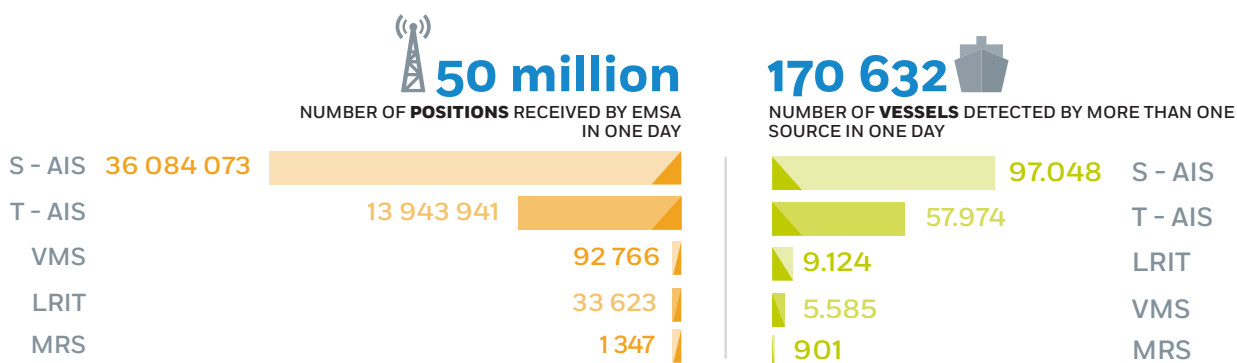
### SAFESEANET

Vessel and voyage related information across the EU is shared among targeted users through the SafeSeaNet system. The information flows and system functionalities are designed to enhance maritime safety and security, as well as to boost the efficiency of maritime traffic and transport. EMSA works to provide the national administrations (port authorities, coastal stations, search and rescue, vessel traffic services, pollution response bodies, etc.) with 24/7 access to the system.

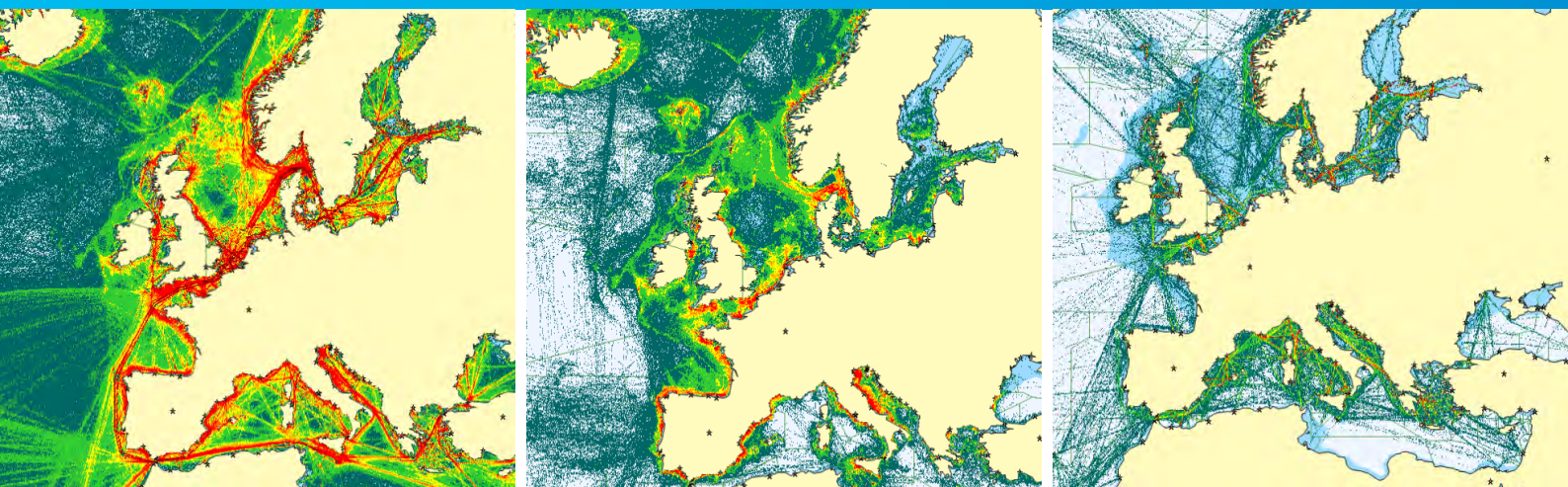
Importantly, EMSA works alongside national authorities to ensure the interaction of their systems with SafeSeaNet. This allows SafeSeaNet to serve as a European platform for maritime data exchange. Mandatory functions cover the collection and distribution of data on vessel traffic monitoring, port call information, dangerous and polluting cargo, security, waste and cargo residues, and incident and accident reports. The various central databases that form part of the SafeSeaNet ecosystem help to improve data quality on the individual national databases.

In 2022, progress was made regarding the development of four databases: the Central Ship Database which receives and stores up-to-date information on ship identifiers and which serves as a reference for national systems; the Central Hazmat Database for information on dangerous and polluting goods which is particularly useful for decision-making on places of refuge for ships in need of assistance; the Central Location Database for information on locations and port facilities codes; and, the Central Organisations Database for information on authorities and organisations. In the case of the Central Ship Database, the set-up was expanded using system-to-

#### DATA PROCESSED BY EMSA INFORMATION SERVICES (activities on 27/09/2022)







Traffic Density Maps made available through SEG showing from left to right: all ship categories, fishing vessels and passenger ships

system communication for the integration of LRIT ship data, THETIS Port State Control inspection data and information from commercial data providers for ships of 100 GT and above.

Gaining a better understanding of marine traffic – identifying where the main shipping lanes are and which ship types are navigating on which lanes, for example – is another way in which users can benefit from the SafeSeaNet service, through Traffic Density Maps, which can be generated according to specific criteria such as timeframe and ship type.

The Interoperability project launched in 2018 was completed in 2022. The project delivered several outcomes such as the development of the traffic density mapping service with additional categories of maps, the development and testing of solutions to facilitate the reporting procedures from ship to shore and improve the coastal stations' situation awareness and the development of an automatic port call detection service which uses SafeSeaNet's ship position tracking. An important outcome of the interoperability project was the implementation of the new pilot project named 'Integrated Reports Distribution' (IRD).

The IRD project proved that there is an untapped potential to simplify the work of both ships and coastal stations through the re-use of data and the 'reporting once' principle allowing the reduction of voice communication. The concept was tested by EMSA with participating Member States. Some of the Member States expressed their willingness to work further on this project and to see this service as fully operational in the future.

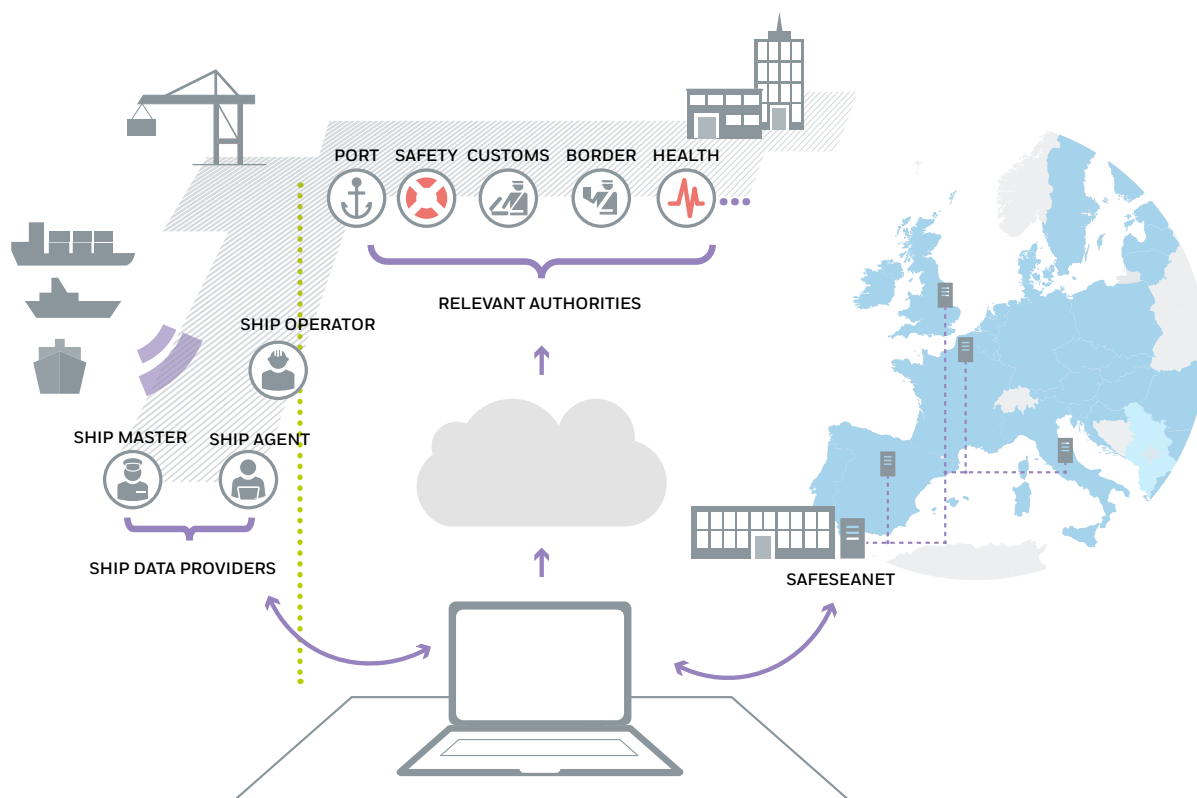
Also in connection with the IRD pilot project, EMSA began providing technical assistance to support the EUREKA Consortium during the preparatory and implementation phase for modernising the IMO adopted Ship Reporting System (SRS) in the Adriatic Sea (ADRIREP). The EUREKA Consortium consists of representatives of the maritime administrations of Albania, Italy, Croatia, Greece, Montenegro, Slovenia and Bosnia and Herzegovina. Support will continue in 2023 regarding the technical implementation as well as the administrative arrangements for the approval of the modernised ADRIREP in IMO.

## EUROPEAN MARITIME SINGLE WINDOW

When a ship enters, stays or leaves a port, its maritime transport operator has to submit a set of information to a number of bodies. This reporting process is currently not harmonised between ports, placing an excessive administrative burden on shipping operators. The entry into force of Regulation (EU) 2019/1239 on the European Maritime Single Window environment (EMSWe) brings all the reporting linked to a port call together into one digital space, to harmonise reporting procedures for shipping operators and to ensure the efficient sharing and reuse of data. Full implementation of the regulation must be achieved by 15 August 2025.

In preparation for this, EMSA worked with experts of the Member States and shipping industry's associations to elaborate technical specifications related to the various EMSWe datasets and the functionalities of the graphical user interfaces. These specifications were then used for drafting the delegated and implementing acts foreseen by Regulation (EU) 2019/1239 to set up harmonised Maritime National Single Windows (MNSWs). The specifications delivered by EMSA were reflected in the Delegated and Implementing Regulations that were adopted by the College of Commissioners on 7 November 2022 and will be published early 2023.

On behalf of the European Commission, EMSA also contributed to the elaboration on the IMO Compendium on Facilitation and Electronic Business which defines a harmonised worldwide standard for the electronic fulfilment of reporting obligations in Maritime Single Windows.





## LONG RANGE IDENTIFICATION AND TRACKING (LRIT)

EMSA continued hosting, operating and maintaining the European Union LRIT Cooperative Data Centre (EU LRIT CDC) and the European Union LRIT Ship Database (EU LRIT Ship DB) on behalf of the European Commission and participating countries, i.e. Member States, Norway, Iceland, Montenegro, Georgia, and Tunisia. The Agency also continued hosting, operating, and maintaining the LRIT International Data Exchange (LRIT IDE) on behalf of the International Maritime Organization (IMO) and SOLAS contracting governments. The International LRIT Data Exchange (IDE) interconnects all 69 LRIT Data Centres making it possible for LRIT users worldwide to request and receive LRIT position reports from ships in an effective and timely manner.

## E-CERTIFICATION

The pandemic brought urgency to the shift towards digitalisation, driving shipping closer to paperless documentation. In 2022 EMSA completed its work in the process of defining high level business and technical specifications for the establishment of an EU Seafarers' Certification Platform to facilitate the issuance of e-certificates to seafarers. In this way, the Agency will be offering economies of scale as efforts are centralised in the process of developing, hosting and operating a state-of-the-art system. The platform will make it possible for interested Member States to issue electronic STCW certificates via a secure, accredited and transparency channel.







## CHAPTER 5

### DIGITALISATION





## FACILITATE THE SIMPLIFICATION OF EU SHIPPING BY SUPPORTING EU-WIDE DIGITAL MARITIME SOLUTIONS

### MARITIME DIGITAL SERVICES

The Agency as the main provider of the maritime picture in Europe, continued the development of its Integrated Maritime Services (IMS) producing comprehensive near real time maritime traffic visualisation with the integration of new data, information and functionalities. In 2022 the number of users of IMS increased by 12% and counted for 6 310 individuals while the number of operational bodies rose to 662 marking an annual increase of 7%. IMS were delivered to 26 Member States and Montenegro and five EU agencies and bodies covering an ever wider range of maritime functions including coast guard cooperation. IMS users remained in the centre of the dialogue on the new developments. EMSA successfully organised two IMS User Group meetings and one advanced analytics workshop facilitating discussions on the operational usage of the IMS, planning and prioritising further needs.

Through the IMS, EMSA provides a sophisticated maritime awareness picture of Europe. Drawing on an impressive range of data from multiple sources, the Agency's services help ensure the safety of maritime traffic, assist in improving response to accidents and dangerous situations at sea, and contribute to preventing and detecting pollution by ships. EMSA's systems and thematic services are now a pivotal part of Member State monitoring, information and surveillance functions, and benefit many user communities. The maritime sector is embracing new technologies at an ever-increasing rate, and EMSA is no exception. Across the Agency's services, state-of-the-art technology is key.

Cloud-based solutions, possible future blockchain integrations, machine learning, and leveraging artificial intelligence all form part of EMSA's digitalisation drive in the context of its five-year strategy. Development of cloud-based Long Term Storage and new Advanced Analytics capabilities continued together with interested Member States and EU agencies and bodies.

The maritime awareness picture is made available by EMSA to its key stakeholders via IMS





IMS receives approximately one billion messages per month. This 'big data' pool is then exploited by various maritime focused analytical tools, providing unique operational information to the IMS user communities. Throughout 2022, EMSA continued to enhance Automated Behaviour Monitoring (ABM), adding new historical capabilities using hybrid cloud solutions, as well as the IMS mobile app, thereby adding value for a growing number of end users with an interest in tailor-made services. Registered users now also have the possibility of accessing data related to all vessel arrivals and departures from ports around the world, not just the EU, thanks to the recently created Global Port Call Detection Service.

During 2022, new Automated Behaviour Monitoring and capabilities were deployed for seven additional algorithms enabling users to: gain global information on historical port calls; have access to a historical overview of detected maritime navigational situations and ship related events in parallel with SafeSeaNet enrichments for vessels of interest including the automatic detection of port calls, analyse 'gaps' in vessels reporting positions as well as benefit from the enhanced maritime picture from terrestrial AIS in the area of the Black Sea, Africa and South America.

Under the framework of the EMSA-EFCA Service Level Agreement (SLA), a major overhaul of the EMSA IMS EFCA service continued, implementing and integrating horizontal solutions that benefit all EMSA IMS users, while allowing a degree of customisation needed for the fisheries control community. For Frontex, EMSA continued to provide IMS data system-to-system, amounting to more than 12 billion vessel position messages over the course of the year and 220 000 unique vessels per day. This data forms the core component of the maritime picture shown in Frontex's graphical interfaces.

EMSA provides Europol with access to maritime and surveillance information services to support Europol staff activities in the areas of law enforcement and organised crime activities at sea. EMSA continued to support Europol providing IMS services. The second phase of the 'MS Pilot Project' campaign to open the EMSA IMS-EUROPOL service to Member States was launched in April 2022.

In the context of the EU's Common Security and Defence Policy, EMSA continued to support two distinct EU Naval Force operations, namely EUNAVFOR-Somalia: Operation Atalanta, and EUNAVFOR-Med: Operation Irini. EMSA provided EUNAVFOR with access to the maritime monitoring solution EMSA-IMS-EUNAVFOR Somalia integrated with EUNAVFOR data, such as piracy risk assessments, thereby creating a specifically tailored maritime awareness picture.



## THETIS INFORMATION SYSTEM

The THETIS system was initially set up to allow port state control authorities in the EU, as well as the wider region of Paris MoU members (Canada, Iceland, Norway, Russia and now UK) to report inspection data in one single window. Over the years, the system has evolved to support new modules, including: THETIS-MRV, which supports CO<sub>2</sub> emissions monitoring; THETIS-MED, specifically created for the relevant authorities participating in the Mediterranean MoU on Port State Control; and, THETIS-EU, for data on inspections and verifications required by EU legislation and not covered by the Port State Control Directive.

In 2022 both the THETIS-Port State Control and THETIS-EU inspection databases were fully operational, supporting the selection of ships for inspection and the subsequent reporting of the findings by the competent authorities in accordance with the requirements of the relevant legal acts. To comply with the implementing acts of the Port Reception Facilities Directive, THETIS-EU integrated new functionalities in November 2022 to facilitate Risk Based Targeting and the calculation of Sufficient Dedicated Storage Capacity.

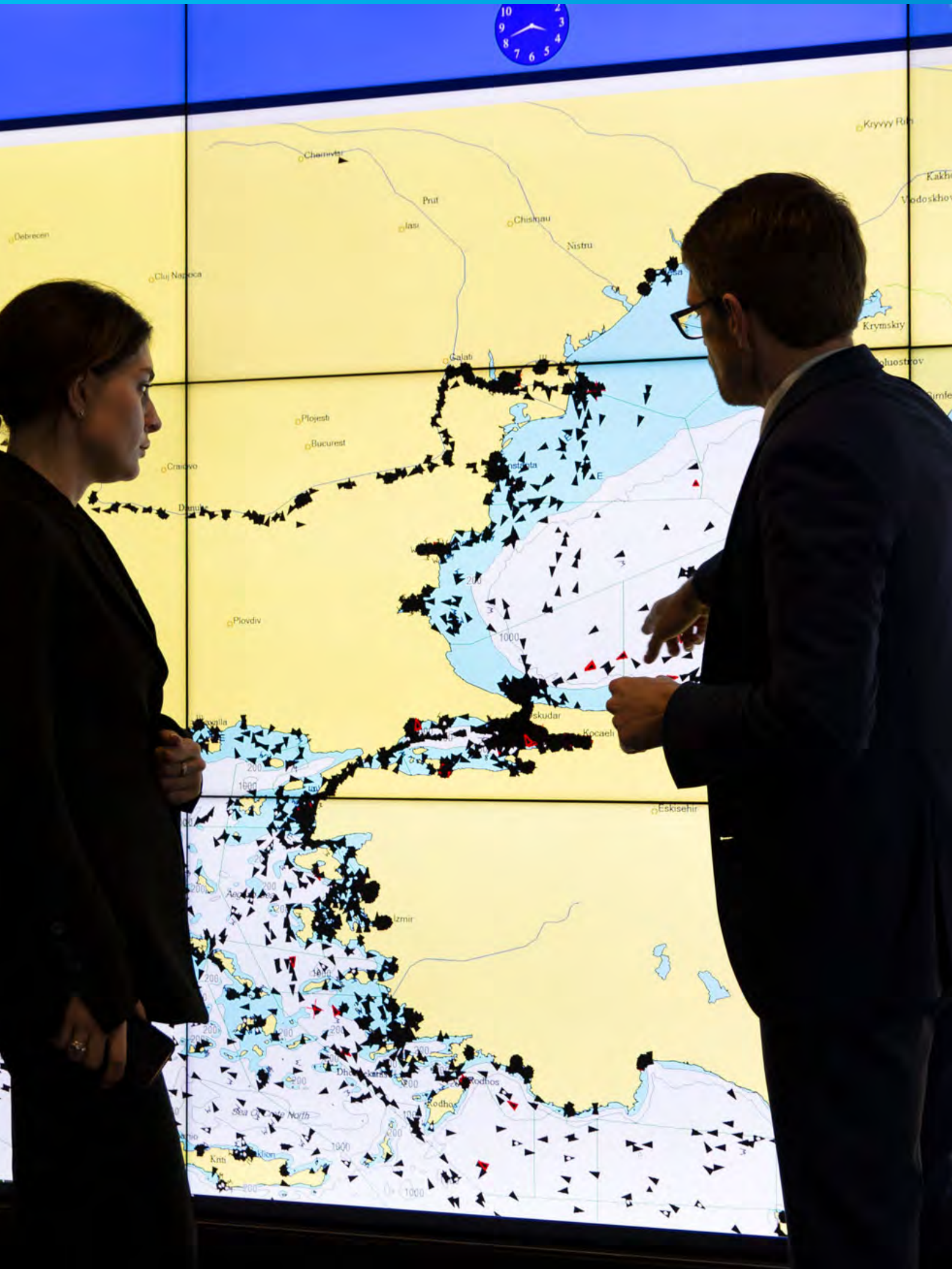
THETIS-MED services were provided continuously without interruption. THETIS-MED is now the only information system supporting Mediterranean MoU on Port State Control as a result of the decommissioning of the previous system at the end of 2021. With 10 Member States active, the number of inspections reached 4 859 at the end of 2022.

In cooperation with the European Commission's Directorate-General for Health and Food Safety (DG SANTE), a new module of THETIS inspection database was developed and deployed to support the voluntary reporting of livestock vessel controls and training was offered to competent authorities. This module benefits the competent authorities responsible for the enforcement of Regulation (EC) 1/2005 aimed at protecting the welfare of animals during transportation.

THETIS and its modules are continually being improved and developed by EMSA to cover more areas of operation, and to offer more services to support the daily work of the relevant authorities at Member State level. The system also supports the European Commission by providing data on inspection results. A comprehensive overhaul of THETIS is currently the pipeline for which a new framework contract has been put in place to facilitate the modernisation, extension and operation of this evolving system.



A new module of THETIS was developed to support livestock vessel controls





## MARITIME SUPPORT SERVICES

The EMSA Maritime Support Services (MSS) is defined as the point of contact for any assistance required in the context of a maritime accident or event where EMSA services could be needed, e.g. in case of pollution or search and rescue cases, as defined in EMSA's Contingency Plan and the Working Arrangement with the European Commission's Directorate-General for European Civil Protection and Humanitarian Aid Operations (DG ECHO). In 2022, the Contingency Plan was activated on a total of 29 occasions.

Together with this, the MSS continued providing helpdesk services to EMSA's user communities and monitoring the performance of EMSA's different IT maritime applications reacting timely when IT services were unavailable, reporting on specific ships/traffic regularly or when required, and managing the digital certificates employed to secure IT system-to-system communications with EMSA stakeholders. MSS also continued supporting Member States in the data quality of the SafeSeaNet and LRIT systems.

The monitoring and reporting on vessels of interest became highly relevant after the Russian invasion of Ukraine on 24 February 2022. The MSS reported on Russian-flagged vessels to Member States and the European Commission, on ship calls to EU ports to specific Member States, and on ship calls related to sanctions (e.g. coal imports). MSS kept the relevant lists of sanctioned ships and applicable derogations updated.

MSS also reported daily on the vessels engaged in the UN Grain Agreement by providing details of the ships, cargo, destinations, etc. to the European Commission and Ukraine.



EMSA services are supporting the implementation of the Black Sea grain deal as well as the monitoring of sanctions.



CHAPTER 6

TECHNICAL ASSISTANCE





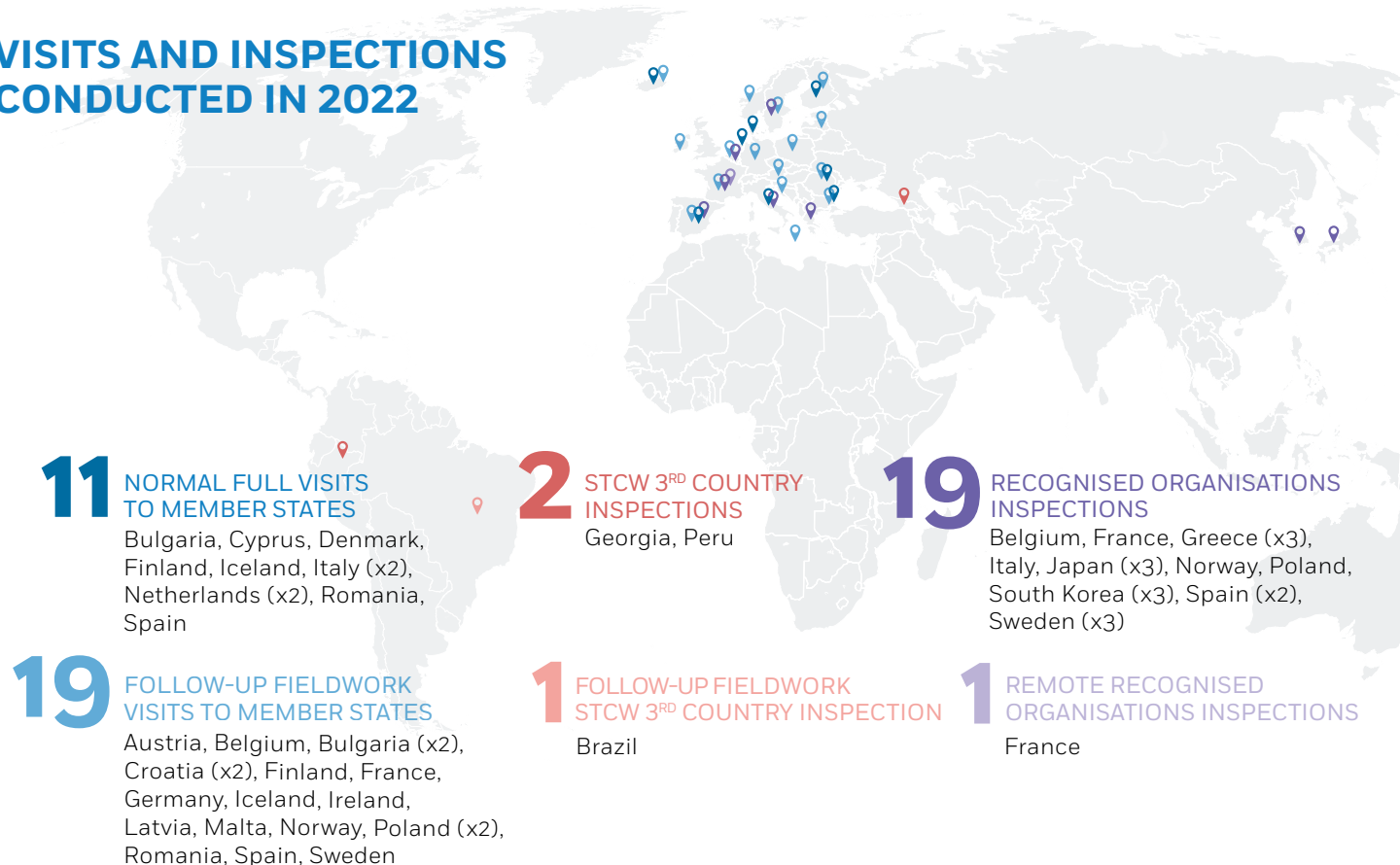
**EMSA'S STRATEGIC PRIORITIES: CONSOLIDATE EMSA'S SUPPORT TO THE COMMISSION FOR THE DEVELOPMENT OF EU AND INTERNATIONAL LEGAL ACTS AND FOR ASSESSING THEIR IMPLEMENTATION; EXTEND AND FORMALISE EMSA TRAINING SCHEMES; SUPPORT EU NEIGHBOURHOOD AND SEA BASIN POLICIES TO LEVEL-UP AND HARMONISE STANDARDS**

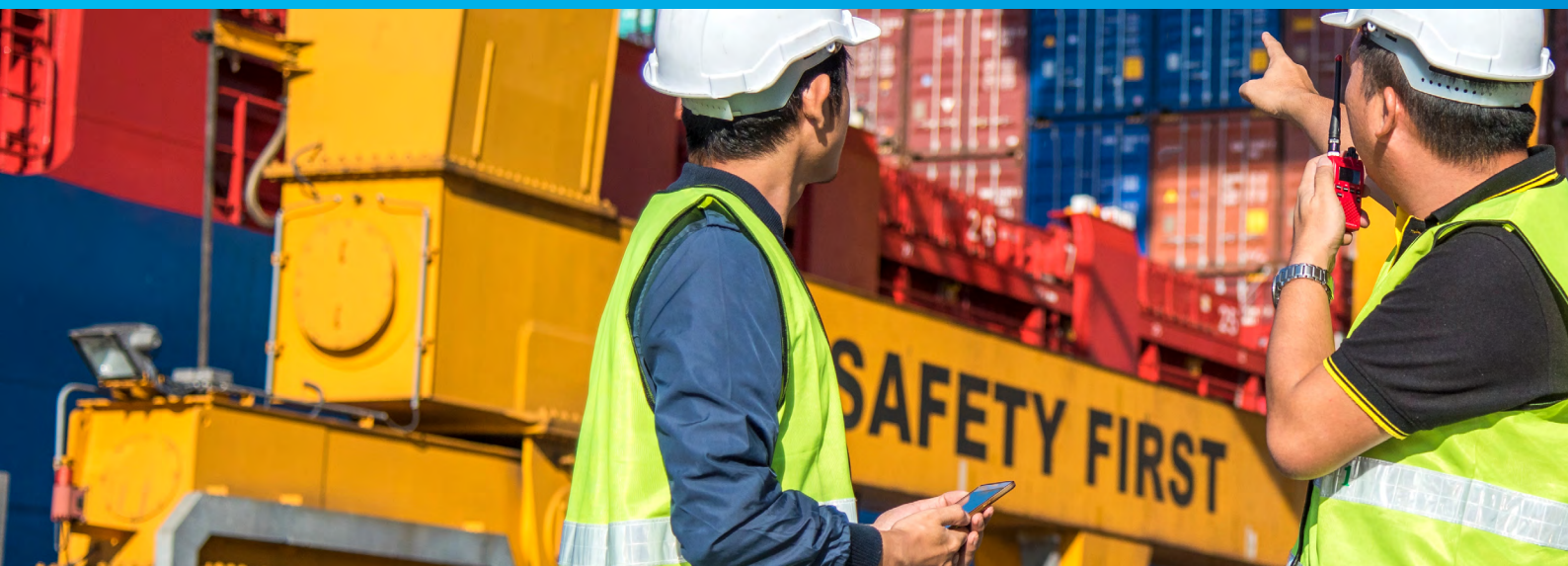
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**VISITS AND INSPECTIONS**

EMSA provides crucial support to the development and implementation of EU standards and regulations in the maritime sector through a programme of visits and inspections, corresponding reports and cumulative horizontal analyses. The continued focus on implementing the Methodology for Visits to Member States, as adopted by the EMSA Administrative Board, ensured that the Agency succeeded in reducing the administrative burden for Member States, developing and sharing best practices and lessons learnt, and strengthening the flow and exchange of information.

**VISITS AND INSPECTIONS CONDUCTED IN 2022**

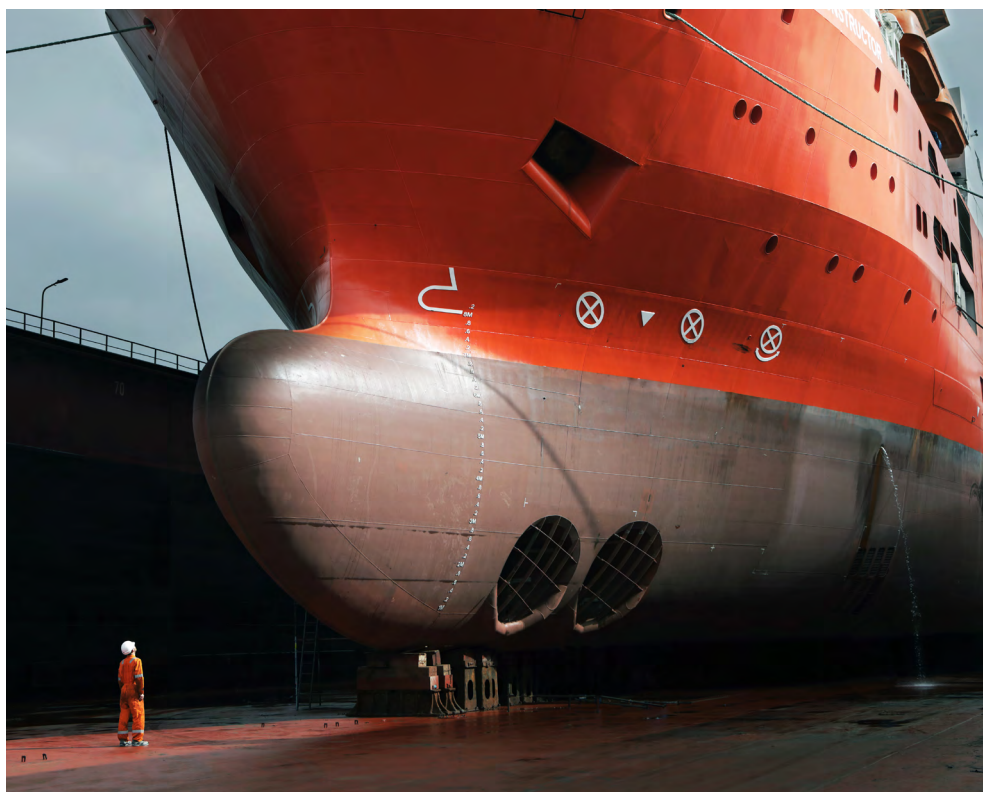




The horizontal analyses, which incorporate a cost-efficiency assessment, confirmed their added value both for Member States and the European Commission.

2022 saw the conclusion of two cycles of Member State visits concerning Port State Control and the sulphur content of marine fuels and the start of the third cycle of visits to Member States in respect of seafarer training. The impact of the COVID-19 pandemic on the wider programme of visits and inspections was finally addressed in 2022 with the completion of the outstanding fieldwork from visits and inspections that were started remotely in 2020 and 2021. By the end of 2022, the programme had been normalised.

Two horizontal analyses were also delivered on the directives on Port State Control and seafarer training to identify issues of cross-cutting relevance and draw general conclusions on the effectiveness and cost-efficiency of the measures in place.



Visits and inspections offer the possibility of identifying strengths and weaknesses with the overall aim of improving maritime safety, security and sustainability across the board.





## VISITS

EU & EFTA / EEA COUNTRIES

33

## INSPECTIONS

- 4** STANDARDS FOR TRAINING  
CERTIFICATION & WATCHKEEPING
- 2** MARINE  
EQUIPMENT
- 2** LOADING & UNLOADING  
OF BULK CARRIERS
- 2** PASSENGER  
SHIP SAFETY
- 1** PORT STATE  
CONTROL

- 20** RECOGNISED  
ORGANISATIONS
- 2** STANDARDS FOR TRAINING  
CERTIFICATION & WATCHKEEPING



2  
49

HORIZONTAL  
ANALYSES  
REPORTS  
SUBMITTED

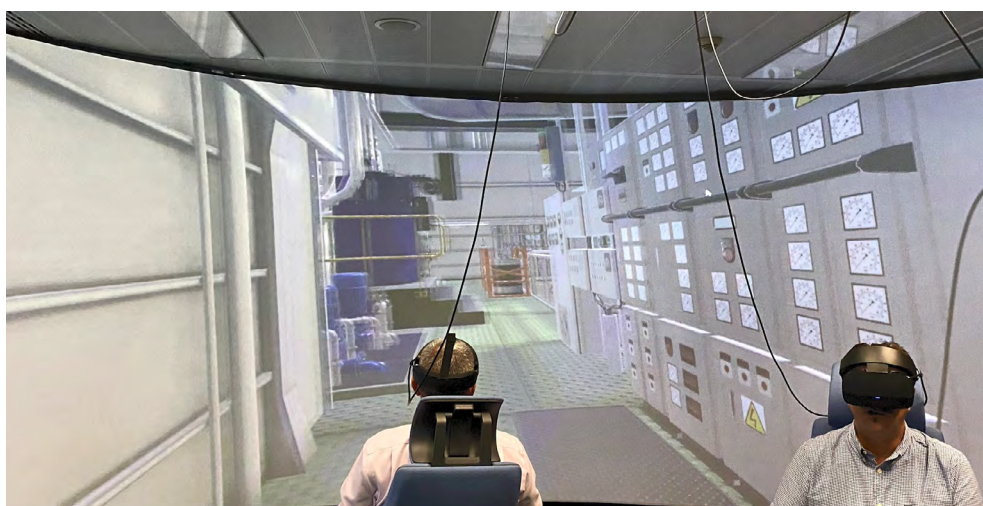


## CAPACITY BUILDING AND THE EMSA ACADEMY

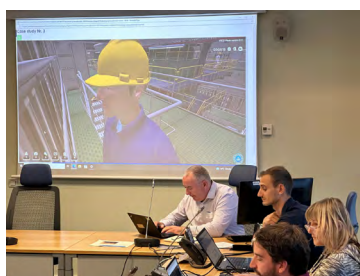
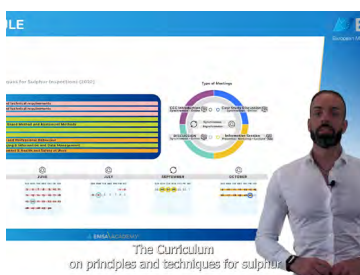
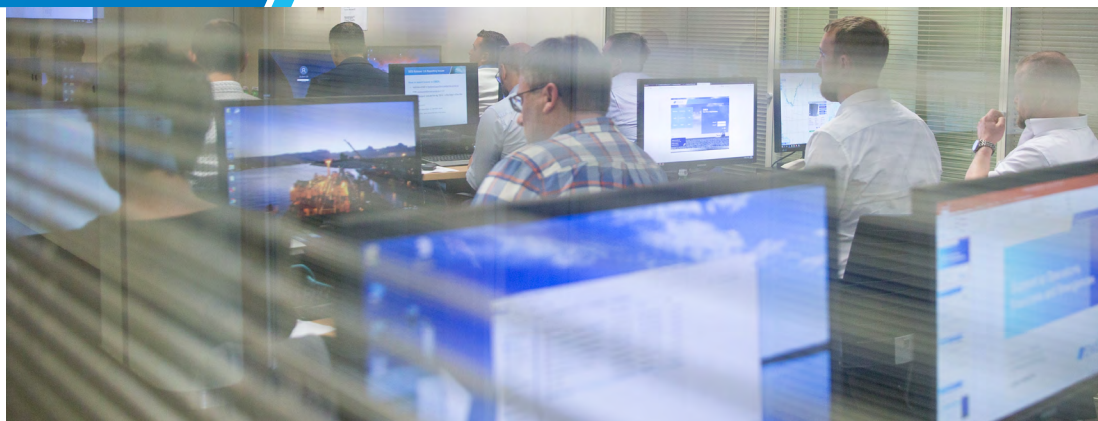
EMSA offers to Member States, candidate and potential candidate countries and neighbouring countries sharing EU sea basins an increasingly innovative, collaborative and flexible capacity building toolbox, that can be specialised and tailor-made and relies increasingly on successful existing services, tools and applications as well as new technologies and learning services outside formal education.

In 2022 the Agency's flagship project, the EMSA Academy, was successfully certified in accordance with the relevant ISO standard for the design, development and delivery of learning services outside formal education in the maritime domain. These learning services constituted the backbone of the different activities planned in support of the competent authorities of the Member States. Identified following a bottom-up approach, they aim at enhancing competencies and skills, thereby fostering capacity at national level towards the uniform implementation and enforcement of safety, security and sustainability rules and regulations in the EU and beyond.

Focussing on functions, and combining state-of-the-art tools, such as the eLearning platform MakCs and the Virtual Reality Environment for Ship Inspections (VRESI), the Agency put together different products in support of professional development such as







The EMSA Academy's blended training approach allows for learning services to be delivered through a flexible and scalable portfolio of tools and technologies.

common core curricula, part-time online courses and short courses. These innovative learning services may entail traditional face-to-face activities as well as modules available online in synchronous and asynchronous mode, leading to certification upon demonstration of acquisition of knowledge and specific skills. The courses are related to identified job profiles or to EU/International maritime legislation, or to EMSA's operational maritime applications and tools.

In 2022, the first common core curriculum delivered was for Sulphur Inspectors, for a duration of seven non-consecutive weeks. It was attended by participants from 20 EU Member States and EEA countries. The curriculum was designed to develop the necessary individual competencies for carrying out duties associated with the inspection of ships for compliance with the international and EU instruments regarding the limits of sulphur in marine fuels (MARPOL Annex VI and the EU Sulphur Directive). It provides learners with the opportunity to increase the knowledge, skills and attitudes required to carry out inspections professionally, efficiently and effectively and to the required standards established by law and benchmarked industry practice.

The delivery of the Basic Level for Flag State Inspectors started also at the end of 2022. With a planned duration of twelve non-consecutive weeks, it is expected to be completed by March 2023. This course is aimed at individuals who are, or are intended to be, State-approved and authorised flag State inspectors, focussed on the competencies required for successfully carrying out inspections on board ships, in order to verify that a ship is fit for service as per international and EU requirements.

Two part-time online courses were also delivered by EMSA. The first one, on EU Institutions and EU maritime legislation, for a total duration of nine weeks, was attended by participants from 18 Member States and Iceland, as well as by staff from the European Commission and EMSA. The second one was a course for Maritime Search and Rescue (SAR) Coordinators. Its duration was two weeks and was attended by participants from EU and EEA States.

Following the interest expressed by third countries, access to tools in support of Port State Control activities in different regions of the world was authorised by the EMSA Administrative Board, therefore confirming the potential for exporting EU standards and solutions beyond the European geographical dimension. Currently, eight out of nine Port State Control regimes in the world, as well as the Australian Maritime Safety Authority, use EMSA tools, namely RuleCheck and/or MaKCs.



During 2022 the Agency provided regular and ad-hoc statistics and analytics aimed at expanding information services to analyse data and identify trends and risks to support safety, security and sustainability, namely the monthly reports to relevant authorities and the European Commission on the impact of the war in Ukraine on maritime transport. The Agency has also supported with meaningful data and technical analysis the work of the European Commission in relation to the sanctions applied to Russia as well as the ongoing Impact Assessments for the revision of the Flag, Port and Accident Investigation Directives.

The Dynamic Overview of National Authorities (DONA) platform went live on June 2022 with the Country Profile section. This is an important step towards digitalisation and simplification that will provide the general public with added value information. Through the DONA Reporting Gate, Member States can provide reports to the European Commission on the implementation of specific legal acts with much less of an administrative burden.

The EU Maritime Profile was also further enriched, providing access to additional data and new areas related to marine casualties and incidents as well as the environment.





**Building up national capacities among Black and Caspian Sea countries is the aim of the BCSEA II project which offers various training opportunities and access to digital tools**

## PRE-ACCESSION AND EUROPEAN NEIGHBOURHOOD COUNTRIES

The Agency continued to be a centre of excellence for capacity building actions entrusted to EMSA by the European Commission for Pre-Accession and European Neighbourhood Policy countries. The project 'Preparatory measures for the future participation of relevant IPA II beneficiary countries in the European Maritime Safety Agency (EMSA)' funded by the EU through the Instrument for Pre-accession Assistance (IPA) with beneficiary countries Albania, Bosnia-Herzegovina, the Republic of North Macedonia, Montenegro, Serbia and Turkey, which started on 1 May 2020 and expected to be completed by the end of June 2023, continued to be implemented.

As maritime safety, maritime security and protection of the marine environment are common concerns of the EU Member States and third countries sharing the same sea basins, EMSA continued to implement the two projects for technical assistance for the Mediterranean Sea (SAFEMED IV) and the Black and Caspian Sea (BCSEA). Both projects were completed in 2022, SAFEMED IV by March and BCSEA by September 2022. Taking into account their successful outcome, new projects were entrusted to the Agency: SAFEMED V started in April 2022, and BCSEA II started in October 2022. Both projects have a very ambitious action plan, combining the priorities set at EU level by the European Commission and reflected in the 5-Year Strategy pursued by the Agency, and aim to contribute to the approximation of standards related to maritime safety, security, pollution prevention and response.

The outbreak of the war in Ukraine and the increased risk for pollution in the Black Sea pushed for a dedicated action within the context of the BCSEA project to acquire specialised oil pollution response equipment earmarked for Ukraine and Georgia.



## CHAPTER 7

### STRATEGIC SUPPORT



## EUROPEAN COOPERATION ON COAST GUARD FUNCTIONS

The European Union and its Member States have a strategic interest across the global maritime domain in identifying and addressing relevant challenges linked to the sea. Within the EU, there are more than 300 civilian and military authorities responsible for carrying out coast guard functions. These functions comprise tasks related to safety and security at sea, search and rescue, border control, fisheries control, customs activities and environmental protection and response.

EMSA together with the European Fisheries Control Agency (EFCA) and the European Border and Coast Guard Agency (Frontex) work jointly to support these national authorities as they carry out coast guard functions at national, EU and, where appropriate, international level. In 2022, the annual European Coast Guard Event took place in hybrid format, hosted by Frontex in Warsaw.

This fifth annual event marked the beginning of EMSA's second chairmanship of the tripartite working arrangement which now runs until June 2023. The event offered the opportunity to look at three of the specific deliverables being offered to Member States as part of this form of enhanced cooperation: the Maritime Data Catalogue which presents the different datasets available to authorities via the three agencies; the Practical Handbook on European cooperation on coast guard functions and capacity building; and, the Guidelines for the Implementation of Multipurpose Maritime Operations (MMO).

As part of European Maritime Day 2022, a joint workshop was held in Ravenna in May with a focus on the role digital transformation can play in supporting coast guard function-related activities.

Finally, the agencies were actively involved in the works of the Coast Guard Global Summit, an initiative launched at global level by the Japanese Coast Guard to foster dialogue and cooperation.



EMSA became chair of the tripartite working arrangement, represented here by a ship's bell symbolising a change in watch.



## EFCA SERVICE LEVEL AGREEMENT

EMSA supports the European Fisheries Control Agency in working to tackle illegal, unreported and unregulated fishing through the coordination of joint deployment plans. A service level agreement has been in place with EMSA since 2015 and is renewed yearly. On the one side, this agreement sets out the conditions for EFCA to provide EMSA with access to the Vessel Monitoring System (VMS) data and vessel identifiers of fishing vessels. On the other, it sets out the conditions for EMSA to provide EFCA with surveillance tools such as Integrated Maritime Services (IMS) and Copernicus satellite imagery. Remotely Piloted Aircraft System (RPAS) drones are also part of this agreement and are being made available to EFCA for operational services.

In 2022 the major overhaul of the EMSA IMS EFCA service continued, implementing and integrating horizontal solutions that benefit all EMSA IMS users, while allowing a degree of customisation needed for the fisheries control community.

With more than 1 250 users, the IMS service for EFCA has become indispensable for the day-to-day fisheries control actions and can serve as a powerful back-up for national legacy applications. A new SLA was signed in December 2022 reflecting EFCA's agreement for a more structured approach regarding resource allocation.

## FRONTEX SERVICE LEVEL AGREEMENT

EMSA supports Frontex in conducting operations to address irregular migration and cross-border crime along European maritime borders. The service level agreement between Frontex and EMSA was extended indefinitely and includes support for the implementation of the European Border Surveillance System (EUROSUR). Activities in 2022 were based on an annual programme and service description agreed between the agencies.

Among the many services provided to Frontex is Earth Observation which allows for the delivery of very high-resolution optical imagery for the monitoring of areas of interest, whether at sea, on the coastline or in port. In 2022, over 2 000 satellite synthetic aperture radar images and 800 optical images were acquired for Frontex and shared with the Member States and other agencies. Frontex also continued to make extensive use of EMSA's Automated Behaviour Monitoring capability, with 33 different algorithms delivering more than 700 000 alerts to the border control user community.

## MARITIME ANALYSIS AND OPERATIONS CENTRE

EMSA supports MAOC-N in its efforts to suppress illicit drug trafficking by sea and air, under a Cooperation Agreement that has been automatically renewed since December 2020. By providing a wide array of maritime monitoring and surveillance tools and services, the Agency effectively helps to counter narcotics operations. MAOC-N is an initiative by six EU member countries (France, Ireland, Italy, Spain, the Netherlands, Portugal) and the UK and is co-funded by the Internal Security Fund of the European Union.

65<sup>th</sup> Administrative Board meeting held in November, 2022

## EXECUTIVE AND CORPORATE SERVICES

### IMPLEMENTATION OF EMSA'S 5-YEAR STRATEGY

2022 marked the third year of implementation of EMSA's 5-year strategy 2020–2024, which forms the basis for this publication. The main achievements set out here represent the Agency's strategic priorities in the areas of the '5 S', namely Sustainability, Surveillance, Safety, Security and Simplification.

### ADMINISTRATIVE BOARD MEETINGS

EMSA's Administrative Board held three ordinary meetings in 2022. Each meeting was preceded by a meeting of the Administrative and Finance Committee where technical, financial and administrative matters were reviewed in detail. The March Board meeting was held online and the June meeting was held in hybrid form. The Administrative Board meeting of November took place in presential mode, kicking off with a dynamic workshop to exchange views on the priorities for 2024–2026.

This was the opportunity for Board members to share their views on the future of the Agency in each of the three areas of Sustainability, Safety & Security, and Simplification & Digitalisation. The adoption of the planning document for 2023–2025 marked an important milestone of this meeting as did the approval of six Administrative Arrangements. This allowed the Agency to proceed with the signature of draft agreements with a range of working partners, from DG ECHO – covering the working arrangement between the European Commission's Emergency Response Coordination Centre and EMSA's 24/7 Maritime Support Services in the context of maritime emergencies and requests for assistance from Member States – to the MAR-ICE network involving a three-party agreement including the European Chemical Industry Council (Cefic) and the *Centre de Documentation de Recherche et d'expérimentations sur les pollutions accidentelles des eaux* (Cedre) for the provision of 24/7 expert information service of chemicals.



## GENDER BALANCE

EMSA continued its strong commitment to improving gender balance and equality in the maritime sector by launching its latest Gender Action Plan for 2022-2025. The plan focuses on improving gender balance and equality in the long term at EMSA on a qualitative basis. This will be achieved through various actions such as awareness campaigns, outside activities challenging stereotypes, equality regarding working conditions and the promotion of EMSA and maritime careers.

Members of EMSA's Women Network have assisted to implement the Gender Action Plan through the very successful Speed Network Initiative. Under this initiative, women interested in a position at EMSA or a career in the maritime sector in general have the opportunity to organise a short informal conversation with female EMSA staff members about their careers at the Agency or their experience in the maritime sector. Network members have also visited schools in the capacity of the Ambassador's Programme with the aim to gain students' interest when making career decisions and to attract the interest of women in particular with the long-term objective to receive more female applications in the future. EMSA will continue implementing actions from the plan in the upcoming years.

The traineeship programme continued to be successful and to attract young female graduates. The statistics of 2022 show that young female graduates filled 68.42% of EMSA's traineeship positions. The duration of the traineeship was revised so trainees have the possibility of a further six-month extension, depending on budget and the performance of the trainee. This makes the traineeship scheme more attractive while allowing the Agency to benefit from the expertise the trainees have gained in their initial months of traineeship. In 2022, EMSA was able to accommodate 19 trainees allowing recent graduates to start a career in the maritime sector.

## QUALITY & ENVIRONMENTAL MANAGEMENT

The Agency's quality management system ensures that stakeholder needs and expectations are met, and that the quality of EMSA's services remain at a consistently high level.

EMSA is registered under the EU Eco-Management and Audit Scheme (EMAS) and has in place a dedicated environmental management system. This helps to ensure that the Agency not only endorses sound environmental management but also follows through on making continuous improvements.

In addition, the Agency's Integrated Quality and Environmental Management System (IQEMS) ensures that stakeholder needs and expectations are fulfilled and EMSA services are provided to a high level of quality and in an environmentally friendly manner. The certification by the external Certification Body (TUV Portugal) is the documented evidence of the effective implementation of the system.



EMSA has 40 photovoltaic panels, covering an area of about 160m<sup>2</sup> as part of the Agency's greening project.



Marking 20 years of EMSA together with our partners in the maritime sector

## 20 YEARS OF EMSA

2022 was marked by the celebration of the 20 years of EMSA celebrated with a series of actions and events throughout the year. A Headline Conference was held in Lisbon in the margins of the 64<sup>th</sup> EMSA Administrative Board to mark this important milestone. On 16-17 June EMSA had the great honour and privilege to welcome distinguished speakers and guests to celebrate the Agency's 20<sup>th</sup> anniversary milestone in a conference on the forward-looking theme: 'Charting EMSA's course for the next 20 years'.

The event gathered dignitaries from across the maritime transport sector with keynote addresses from Adina Vălean, EU Transport Commissioner; Kitack Lim, IMO Secretary General; Karima Delli, Chair of the European Parliament's Transport Committee; Justine Bénin, France's State Secretary for the Sea and, Vitaly Kindrativ, Head of the Ukrainian Maritime Administration.

Two highly dynamic and interesting panel discussions were held focussing on day one on 'European shipping in the next 20 years and the role of EMSA', and on day two on 'Innovation and future opportunities' with panellists joining both from Member State Administrations and industry associations and bodies.

The event culminated in the release of the first ever comprehensive overview of maritime safety in the EU - the European Maritime Safety Report (EMSAFE) which sets safety at the core of all maritime activities and upcoming challenges. The #EMSA20years conference was the perfect opportunity to take stock of the achievements so far and more importantly to set the tone for the next 20 years.



# 2022

Highlights timeline







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## ABOUT THE EUROPEAN MARITIME SAFETY AGENCY

The European Maritime Safety Agency is one of the European Union's decentralised agencies. Based in Lisbon, the Agency's mission is to ensure a high level of maritime safety, maritime security, prevention of and response to pollution from ships, as well as response to marine pollution from oil and gas installations. The overall purpose is to promote a safe, clean and economically viable maritime sector in the EU.



### Get in touch for more information

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