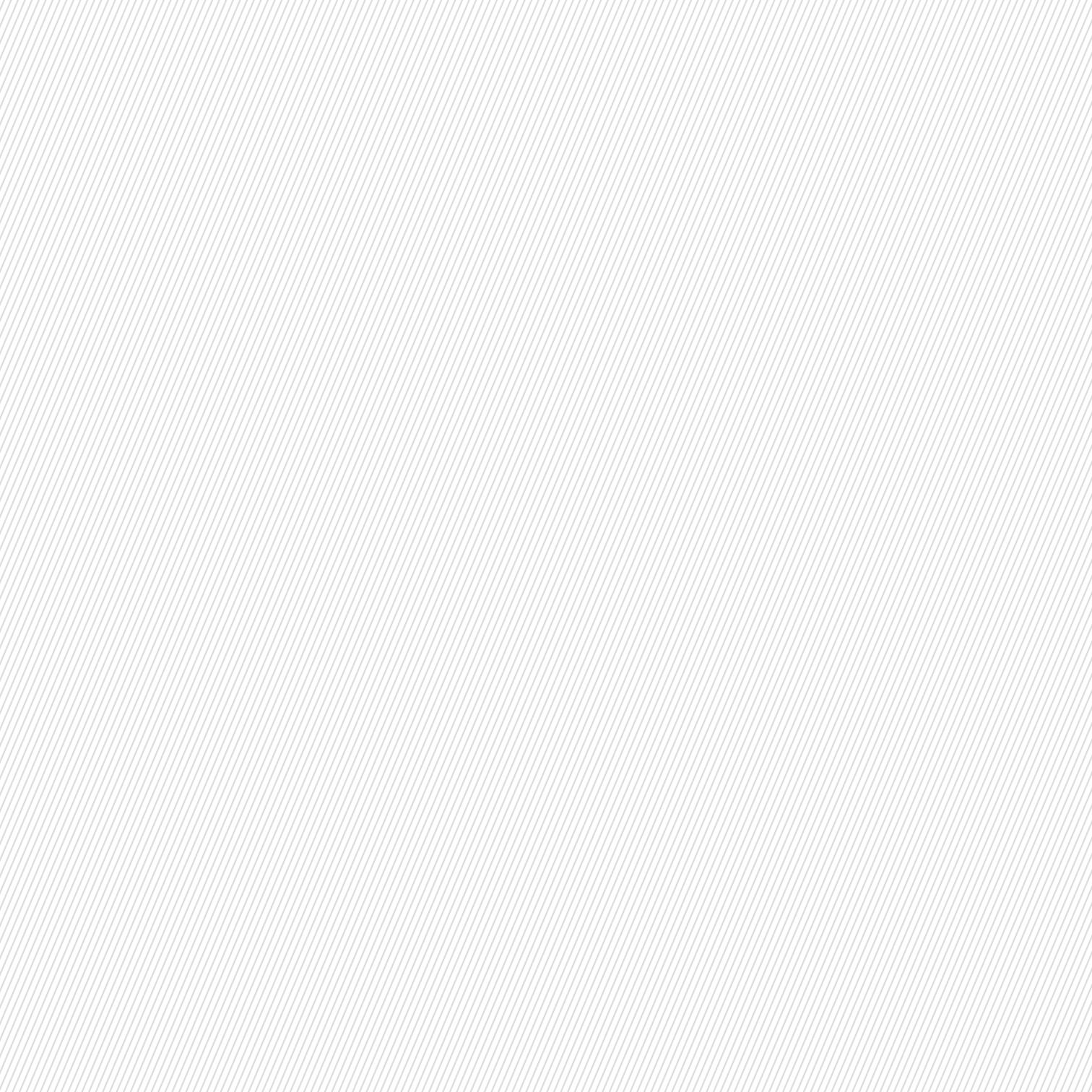




# MARITIME DIGITAL SERVICES CATALOGUE 2022



**MARITIME**

**DIGITAL SERVICES**

**CATALOGUE**

**2022**

## TABLE OF CONTENTS

<b>INTRODUCTION</b>	<b>8</b>		
<b>GET IN TOUCH FOR MORE INFORMATION</b>	<b>8</b>		
<b>SERVICECATALOGUE@EMSA.EUROPA.EU</b>	<b>8</b>		
<b>EMSA SERVICE CHAIN</b>	<b>9</b>		
<b>MARITIME DIGITAL SERVICES CATALOGUE OVERVIEW</b>	<b>10</b>		
<b>1. CORE SERVICE PER CLASS</b>	<b>12</b>		
<b>1.1 INTEGRATED MARITIME SERVICES</b>	<b>12</b>		
1.1.1 Enhanced maritime picture via IMS for Member States' Authorities	13	1.1.10 Satellite AIS (SAT-AIS) data services	32
1.1.1 Enhanced maritime picture via IMS for EUNAVFOR	15	1.1.11 Sat- AIS Data distribution	36
1.1.2 Enhanced maritime picture via IMS for EUNAVFOR-MED	18	1.1.12 Integrated Reports Distribution (IRD) - pilot implementation	38
1.1.3 Enhanced maritime picture via IMS for EFCA	20	1.1.13 Enhanced Maritime Picture via OGC standards - (STAR RTMPS)	40
1.1.5 Enhanced maritime picture via IMS for FRONTEX	22	1.1.14 Traffic density mapping service - TDMS	42
1.1.6 Enhanced maritime picture via IMS for MAOC (N)	24	1.1.15 EMSA Maritime Analytics Tool (EMAT) prototype	44
1.1.7 Enhanced maritime picture via IMS for-Europol	26		
1.1.8 Automated Behaviour Monitoring (ABM)	28	<b>1.2 DIGITAL SERVICES FOR THIRD COUNTRIES</b>	<b>46</b>
1.1.9 Tracking ships over 5 years via LONG TERM STORAGE (LTS, part of EMSA Cloud-based services – High Performance - Integrated Maritime Services)	30	1.2.1 SAFEMED V PROJECT	47
		1.2.2 Preparatory measures for future participation of relevant IPA II countries in European Maritime Safety Agency (EMSA)	50
		1.2.3 BCSEA II project	52
		<b>1.3 CENTRAL REFERENCE DATABASES</b>	<b>54</b>
		1.3.1 Central Ship Database (CSD)	55
		1.3.2 Central Geographical Database (CGD)	58
		1.3.3 Central Organisation Database (COD)	60
		1.3.4 Central Location Database (CLD)	62
		1.3.5 Central Hazmat Database - CHD	64
		1.3.6 Central Country Database – (CCD)	66



## TABLE OF CONTENTS (CONT.)

**1.3 SURVEILLANCE SERVICES****68**

1.4.1	CleanSeaNet (CSN)	69
1.4.2	Copernicus Maritime Surveillance (CMS)	72
1.4.3	RPAS Services	74

**1.5 VESSEL POSITIONING AND REPORTING****78**

1.5.1	SafeSeaNet (SSN)	79
1.5.2	Provision of the SSN enriched Terrestrial AIS data via STAR STREAMING	82
1.5.3	Distribution of the SSN Terrestrial AIS data (enriched or non-enriched) to MS via STAR STREAMING	84
1.5.4	European Union Long-Range Identification and Tracking System Cooperative Data Centre (EU LRIT CDC)	86
1.5.5	International Long-Range Identification and Tracking System Data Exchange (LRIT IDE)	88

**1.6 SHIP SAFETY AND POLLUTION PREVENTION****90**

1.6.1	European Marine Casualty Information Platform (EMCIP)	91
1.6.2	MED Database – ‘Marine Equipment Directive Database’	94
1.6.3	THETIS - PSC	96
1.6.4	THETIS - EU MARSEC	100
1.6.5	THETIS - EU PRF	102
1.6.6	THETIS - EU SRR	104
1.6.7	THETIS - EU RoPAX	106

1.6.8	THETIS - EU Sulphur	108
1.6.9	THETIS - EU Animal Welfare	110
1.6.10	THETIS - eCertificates	112
1.6.11	THETIS - Med	114
1.6.12	THETIS - MRV	116
1.6.13	DONA	118
1.3.7	MAR-CIS	120

**1.7 HUMAN ELEMENT****122**

1.7.1	STCW-IS: Standards of Training, Certification and Watchkeeping Information System	123
-------	---	-----

**1.8 E-LEARNING MARITIME KNOWLEDGE****126**

1.8.1	Maritime Knowledge Centre Services - MaKCs	127
1.8.2	Virtual Reality Environment for Ship Inspections (VRESI)	130
1.8.3	Rulecheck	132

**1.9 MARITIME SUPPORT SERVICES****134**

1.9.1	Maritime Support Services	135
-------	---------------------------	-----

**APPENDIX A****138**



## INTRODUCTION

The EMSA Service Catalogue, external version, provides information on the Maritime Digital Services delivered by EMSA to external users as well as their features, and present status.

Information in the Service Catalogue (SC) reflect details of all ICT-based business services that are being run, or being prepared to run, in the production environment.

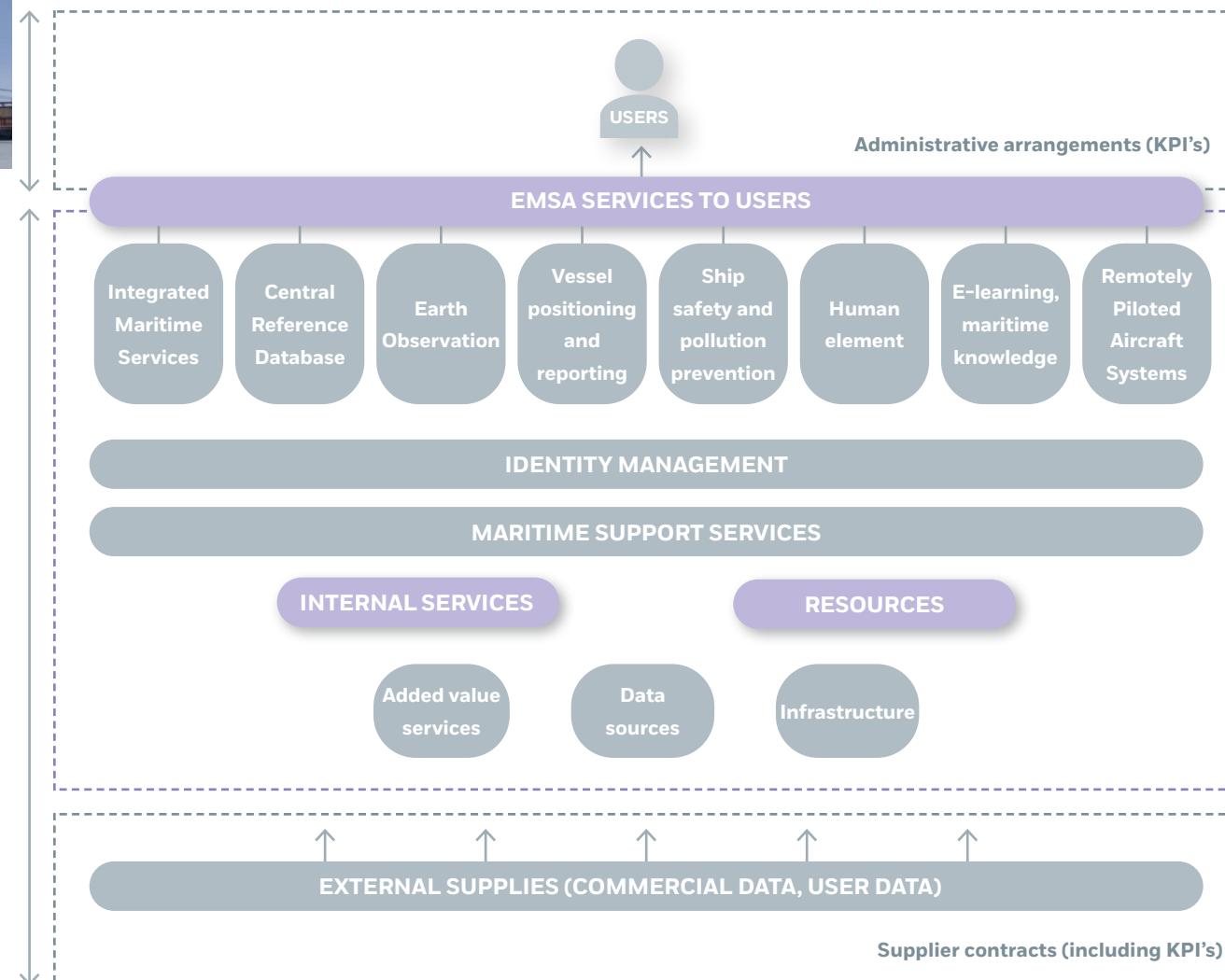
It also provides external users with a basic overview of the data processed and the interfaces available.

In terms of the data managed in the services it was, were applicable, decoded using the Maritime Data Catalogue developed by the Inter-Agency Tripartite Working Arrangement Technical Sub Committee 1 (Ref. Appendix A).

**GET IN TOUCH FOR MORE INFORMATION** / [servicecatalogue@emsa.europa.eu](mailto:servicecatalogue@emsa.europa.eu)

## EMSA SERVICE CHAIN

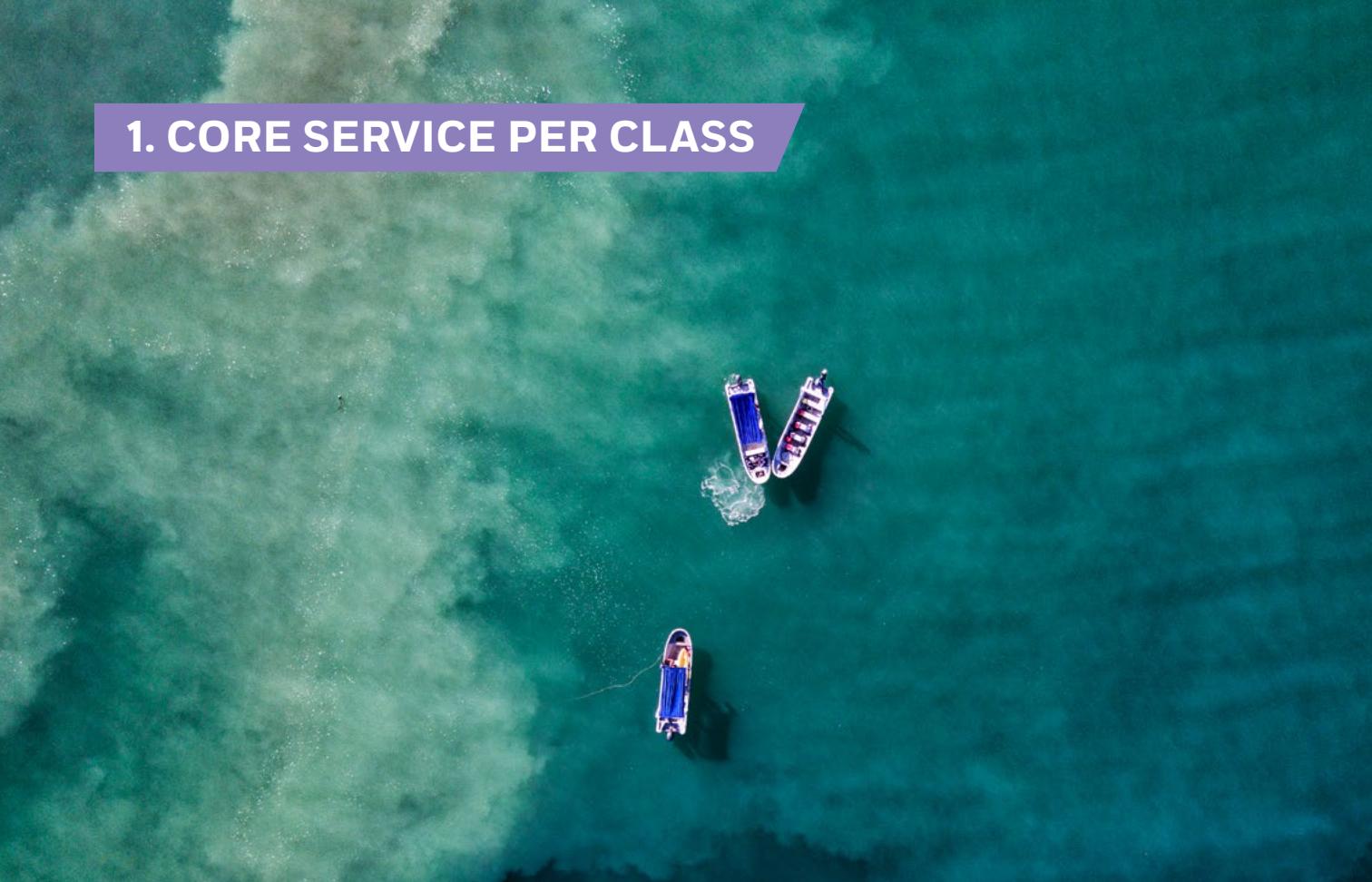
The Service Catalogue reflects one part of the service chain, as illustrated below.



## MARITIME DIGITAL SERVICES CATALOGUE OVERVIEW



# 1. CORE SERVICE PER CLASS



## 1.1 INTEGRATED MARITIME SERVICES

### 1.1.1 ENHANCED MARITIME PICTURE VIA IMS FOR MEMBER STATES' AUTHORITIES

SERVICE CLASS

Integrated Maritime Services

DESCRIPTION

The Integrated Maritime Services (IMS) provide an enhanced real-time maritime domain awareness picture

The IMS services to Member States support the activities performed by EU Member State authorities executing functions in the maritime domain. The service is based on a vast array of position information and satellite data, and responds to operational users' specific needs, providing additional, complementary and supportive tools and functionalities.

SERVICE ACCESS



Users have access to the service through a web-based graphical user interface as well as standardised system-to-system interfaces. The service follows all relevant agreed access rights, as defined by the data owners.

SERVICE DATA (OR PRODUCTS)

2.1 MRS, 2.7 Sat-AIS, 2.2, 2.5 T-AIS, 2.6 LRIT, 6.1 – 6.3 EO imagery and products, 1.1 -1.9 SSN Enrichment.

**BUSINESS UNIT**

3.1 Maritime Digital Services

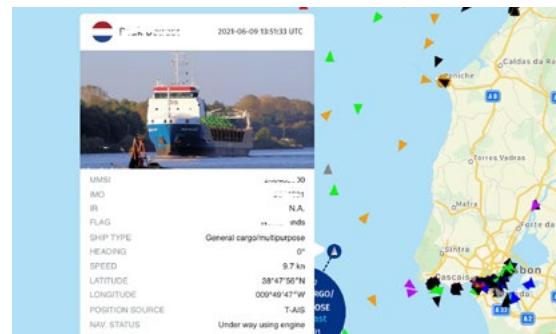
**RELATED AGREEMENTS AND LEGAL BASIS**

VTMIS Directive – 2002/59/EC, as amended. Interface and Functionality Control Document (IFCD) – the latest version.

SERVICE KPI		
Scoreboard Activity/Service	Integrated Maritime Services Availability	
KPI indicator	Percentage per year availability of IMS platform	99%
KPI indicator	Percentage per year availability to Member States	99%



©EMSA 2021, contains modified Sentinel-1 and RADARSAT-2 data. All rights reserved. Certain parts are licenced under conditions to EMSA



**1.1.1 ENHANCED MARITIME PICTURE VIA IMS FOR EUNAVFOR**

**SERVICE CLASS** Integrated Maritime Services

**DESCRIPTION**

The Integrated Maritime Services (IMS) provide an enhanced real-time maritime domain awareness picture.

The IMS-EUNAVFOR service supports the activities performed by the European Naval Forces (EUNAVFOR) under Operation 'Atalanta' executing anti-piracy and law enforcement functions in the maritime domain. The service is based on a vast array of position information and satellite data, and responds to operational users' specific needs, providing additional, complementary and supportive tools and functionalities.

In addition, EUNAVFOR provides additional data in this tailored IMS operation such as extra LRIT data, piracy risk assessment and anti-piracy measures on board vessels.

**SERVICE ACCESS**



EUNAVFOR-Atalanta users have access to the service through a web-based graphical user interface as well as standardised system-to-system interfaces. The service follows all relevant agreed access rights, as defined by the data owners.

**SERVICE DATA (OR PRODUCTS)**

2.1 MRS, 2.7 Sat-AIS, 2.2, 2.5 T-AIS, 2.6 LRIT, 6.1 – 6.3 EO imagery and products, 1.1 -1.9 SSN Enrichment and additional data: extra LRIT data, piracy risk assessment and anti-piracy measures on board vessels.

<b>BUSINESS UNIT</b>
<b>3.3 Simplification</b>
<b>RELATED AGREEMENTS AND LEGAL BASIS</b>

Technical Cooperation Agreement signed between EMSA and EUNAVFOR-Atalanta (06/04/2011).

<b>SERVICE KPI</b>		
Scoreboard Activity/Service	Integrated Maritime Services Availability (same as IMS VTMS)	
KPI indicator	Percentage per year availability of IMS platform	99 %
KPI indicator	Hours maximum continuous downtime of IMS platform	12 max
KPI indicator	Percentage per year availability to EUNAVFOR-Atalanta	99 %



1.1.2 ENHANCED MARITIME PICTURE VIA IMS FOR EUNAVFOR-MED

SERVICE CLASS	Integrated Maritime Services
---------------	------------------------------

DESCRIPTION

The Integrated Maritime Services (IMS) provide an enhanced real-time maritime awareness picture. The IMS-EUNAVFOR-MED provides support to the EU Naval Forces (EUNAVFOR) Operation Irini, which has the mission to undertake systematic efforts to identify, capture and dispose of vessels suspected of being used by migrant smugglers or traffickers.

The service is integrated in the IMS VTMISS and based on a vast array of position information and satellite data and responds to operational users' needs and supportive tools and functionalities.

In addition, EMSA is currently enhancing EUNAVFOR-MED Operation Irini's maritime picture by providing satellite AIS data (system to system) in the Mediterranean region.

SERVICE ACCESS



EUNAVFOR-MED users have access to the service through a web-based graphical user interface as well as standardised system-to-system interfaces. The service follows all relevant agreed access rights, as defined by the data owners.

SERVICE DATA (OR PRODUCTS)

2.1 MRS, 2.7 Sat-AIS, 2.2, 2.5 T-AIS, 2.6 LRIT, 6.1 – 6.3 EO imagery and products, 1.1 -1.9 SSN Enrichment and additional data.

BUSINESS UNIT
3.3 Simplification
RELATED AGREEMENTS AND LEGAL BASIS

Data Access Agreement signed between EMSA and EUNAVFOR-MED (20/08/2015).

SERVICE KPI		
Scoreboard Activity/Service	Integrated Maritime Services Availability (same as IMS VTMISS)	
KPI indicator	Percentage per year availability of IMS platform	99 %
KPI indicator	Hours maximum continuous downtime of IMS platform	12 max
KPI indicator	Percentage per year availability to EUNAVFOR-Med	99 %

1.1.3 ENHANCED MARITIME PICTURE VIA IMS FOR EFCA

SERVICE CLASS

Integrated Maritime Services

DESCRIPTION

The EMSA IMS-EFCA service is provided by EMSA to support EFCA and MS fisheries authorities monitoring and control operations.

Via the dedicated operation in SEG, authorised users have access to a worldwide maritime picture displayed via a web interface designed for quasi real-time visualization and analysis of vessel movements.

Information and functionalities available in the service are customised to support fisheries control activities. They include:

- Fisheries specific information: access to VMS position data from fisheries vessels, fishing vessel details (e.g. gear type), visual information on fisheries areas (e.g. NAFO areas), and fisheries data resulting from inspections;
- Vessel Monitoring and tracking: ability to monitor vessels by making use of last known vessel position reports from different sources such as AIS, LRIT and VMS, and to view historical track of vessels.
- Anomaly detection: In order to monitor vessel behaviour patterns for fisheries control and surveillance purposes, EFCA and its stakeholders may use EMSA's Automated Behaviour Monitoring (ABM) algorithms;
- Vessel Detection: use of satellite imagery to detect vessels in areas of interest through the Copernicus Maritime Surveillance service (CMS).

SERVICE ACCESS



Open to users at EFCA and to fisheries authorities in the Member States. Access to the service must be requested from EFCA.

SERVICE DATA (OR PRODUCTS)

Vessel positions: AIS (SAT-AIS, T-AIS and ship AIS), VMS, and LRIT

SafeSeaNet: ship voyage information

EMSA Central Reference Databases: Fishing Areas Repository in the Central Geographical Database, Central Location Database

Earth Observation Products: CleanSeaNet vessel detection services, Copernicus Maritime Surveillance Service.

BUSINESS UNIT

3.3 Simplification

RELATED AGREEMENTS AND LEGAL BASIS

Service Level Agreement signed between EFCA and EMSA for the sharing of information and capacities to support, each within their mandate, authorities carrying out coast guard functions at national and Union level and where appropriate at international level, and in particular for the activities related to the provision by EMSA of services to EFCA for fisheries control purposes.

SERVICE KPI

Scoreboard Activity/Service

EFCA

KPI indicator

Percentage per year availability

99 %

1.1.5 ENHANCED MARITIME PICTURE VIA IMS FOR FRONTEX

SERVICE CLASS

Integrated Maritime Services

DESCRIPTION

EMSA supports FRONTEX in operations to address irregular migration and cross-border crime along Europe’s maritime borders. A service level agreement (SLA) defines the service conditions. EMSA provides services, including via a system-to-system mechanism, information products and tools tailored to FRONTEX’s needs, including:

- Vessel Monitoring and Tracking: provides FRONTEX with ship positions;
- Vessel Detection: provides FRONTEX with layers of detected objects at sea, derived from SAR satellite images;
- Anomaly Detection: activates alerts based on specific vessel behaviour patterns;
- Activity Detection: provides information about detected activity in coastal areas and the interpretation of high resolution optical imagery;
- Vessel Reporting: supports FRONTEX in identifying vessels that meet specific criteria, indicating a possible involvement in illegal migration or cross-border crime;
- Central Maritime Databases: provides information on elements which are common across various EMSA systems, such as the Central Location Database;
- Incidental Sightings of Potential Maritime Pollution: To inform affected Member State(s) about any incidental sighting of potential marine pollution detected during Frontex Maritime Joint Operations (JO);
- Maritime Analytics Service: Eliciting, developing and/or delivering maritime related risk analysis products.

SERVICE ACCESS



Border Control community via an external interface.

SERVICE DATA (OR PRODUCTS)

SSN Products: Port call data and number of persons on board;  
 Vessel positions: AIS/LRIT/VMS;  
 EMSA Central Reference Databases: Central Location Database, Central Organisation Database;  
 Earth Observation Products: CleanSeaNet vessel detection services, EMSA support to Earth Observation planning under the EMSA-Frontex SLA.

BUSINESS UNIT

3.3 Simplification

RELATED AGREEMENTS AND LEGAL BASIS

Service Level Agreement between FRONTEX and EMSA for the provision of services in support of FRONTEX activities, including for the implementation of the EUROSUR network.

SERVICE KPI

Scoreboard Activity/Service	FRONTEX	
KPI indicator	Percentage per year availability to FRONTEX	99 %
KPI indicator	Minimum number of exercises EMSA participates in	2

1.1.6 ENHANCED MARITIME PICTURE VIA IMS FOR MAOC (N)

SERVICE CLASS	Integrated Maritime Services
---------------	------------------------------

DESCRIPTION

The EMSA IMS-MAOC(N) service is used mainly by the MAOC (N) analysts, and it is open to the Country Liaison Officers (LO) with the exception of The UK.

The main features that are available in the EMSA IMS-MAOC(N) service are:

- Range of information sources including Terrestrial AIS (T-AIS), Satellite AIS (S-AIS), LRIT and MRS position messages up to 3 years in the past;
- Access to vessel details and voyage related data;
- Access to Automated Behavioural Algorithms (ABMs) for analysing vessels positions and alerting of user specific vessel behaviours;
- Access to the IMS Mobile application;
- Earth Observation products, either acquired through the Copernicus Maritime Surveillance (CMS) service and is shared by FRONTEX, EFCA and CleanSeaNet. EO services delivered to MAOC (N) using the CMS include:
  - Activity Detection (ACT);
  - Vessel Detection and Identification Services in combination with EMSA vessel data streams (VDS); and
  - The provision of satellite images (both synthetic aperture radar and optical);
- Access to the EMSA Maritime Analytics Tool (EMAT);
- Access to the pre-operational Long-Term Storage (LTS) cloud service.

SERVICE ACCESS



Open to MAOC (N) users. Access to the service must be requested from MAOC (N).

SERVICE DATA (OR PRODUCTS)

Vessel positions: AIS (SAT-AIS and T-AIS), LRIT and MRS.

SSN products : Port call data, Hazmat, Waste, Security, Bunkers, Incidents, Exemptions, MRS reports.

EMSA Central Reference Databases: COD, CLD, CSD.

Earth Observation Products: CleanSeaNet vessel detection services, Copernicus Maritime Surveillance service.

BUSINESS UNIT

3.3 Simplification

RELATED AGREEMENTS AND LEGAL BASIS

The first EMSA-MAOC (N) Cooperation Agreement (CA) was signed in August 2014 with an initial duration of 5 years. EMSA and MAOC (N) developed a new CA reflecting the experience gathered and lessons learnt that was signed on 17 December 2020 for an indefinite period.

SERVICE KPI

Scoreboard Activity/Service	Maritime digital services
KPI indicator	Percentage per year availability of IMS specific functionalities and data sets to support relevant anti-piracy and maritime law enforcement and border control bodies (EUNAVFOR-Somalia: Operation Atalanta, EUNAVFOR-Med: Operation Irini, EUROPOL, MAOC (N)) <span style="float: right;">99 %</span>

1.1.7 ENHANCED MARITIME PICTURE VIA IMS FOR-EUROPOL

SERVICE CLASS	Integrated Maritime Services
---------------	------------------------------

DESCRIPTION

The EMSA IMS-EUROPOL service is used mainly by the O1-15 Special Tactics team, which coordinates the service at Europol level. O2-11 Drug Operation Coordination team and Europol EU MS liaison desks were given access to the service in 2022.

The main features that are available in the EMSA IMS-EUROPOL service are:

- Range of information sources including Terrestrial AIS (T-AIS), Satellite AIS (S-AIS) and MRS position messages up to 3 years in the past;
- Access to vessel details and voyage related data;
- Access to Automated Behavioural Algorithms (ABMs) for analysing vessels positions and alerting of user specific vessel behaviours;
- Access to the IMS Mobile application;
- Earth Observation products, either acquired through the Copernicus Maritime Surveillance (CMS) service and is shared by FRONTEX, EFCA and CleanSeaNet. EO services delivered to EUROPOL using the CMS include:
  - Activity Detection (ACT);
  - Vessel Detection and Identification Services in combination with EMSA vessel data streams (VDS); and
  - The provision of satellite images (both synthetic aperture radar and optical);
- Access to the EMSA Maritime Analytics Tool (EMAT).

SERVICE ACCESS



Open to Europol staff and temporary to Law Enforcement Authorities in the Member States as part of the second phase of the MS Pilot Project campaign launched in April 2022.

SERVICE DATA (OR PRODUCTS)

Vessel positions: AIS (SAT-AIS and T-AIS) and MRS.

SSN products: Port call data, Hazmat, Waste, Security, Bunkers, Incidents, Exemptions, MRS reports.

EMSA Central Reference Databases: COD, CLD, CSD.

Earth Observation Products: CleanSeaNet vessel detection services, Copernicus Maritime Surveillance service

BUSINESS UNIT

3.3 Simplification

RELATED AGREEMENTS AND LEGAL BASIS

Working Arrangement signed between EMSA and EUROPOL (18/12/2018).

SERVICE KPI

Scoreboard Activity/Service	Maritime digital services
KPI indicator	Percentage per year availability of IMS specific functionalities and data sets to support relevant anti-piracy and maritime law enforcement and border control bodies (EUNAVFOR-Somalia: Operation Atalanta, EUNAVFOR-Med: Operation Iriini, EUROPOL, MAOC (N)) <span style="float: right;">99 %</span>

1.1.8 AUTOMATED BEHAVIOUR MONITORING (ABM)

SERVICE CLASS	Integrated Maritime Services
---------------	------------------------------

DESCRIPTION

ABMs are Integrated Maritime Services (IMS) tools automatically analysing various position reports for the detection of specific ships' behaviours. Their aim is to reduce a workload of the maritime surveillance operators by providing an increased maritime situation awareness and automatic alerting. STAR ABM is a horizontal service allowing access to various ABM algorithms and the related automatic alerting. It is used by EU Member States and EU Bodies executing functions in safety of marine traffic, environmental protection fisheries control, border control and security.

SERVICE ACCESS



STAR ABM services can be accessed via the IMS Graphical Interface (SEG) as well as the S2S interfaces.

SERVICE DATA (OR PRODUCTS)

2.1 MRS, 2.7 Sat-AIS, 2.2, 2.5 T-AIS, 2.6 LRIT, 6.1 – 6.3 EO products - VDS, 1.1 -1.9 SSN Enrichment – basic information, 3.4 Central Ship Database, 3.1 Central Geographical Database (CGD).

BUSINESS UNIT

3.1 Maritime Digital Services

RELATED AGREEMENTS AND LEGAL BASIS

VTMIS Directive – 2002/59/EC, as amended.  
Interface and Functionality Control Document (IFCD) – the latest version.

SERVICE KPI

Scoreboard Activity/Service	STAR ABM	
KPI indicator	Percentage per year availability of STAR ABM	99%
KPI indicator	Hours maximum continuous downtime of STAR ABM platform	12 Max
KPI indicator	Percentage per year availability to Member States	99%

**1.1.9 TRACKING SHIPS OVER 5 YEARS VIA LONG TERM STORAGE (LTS, PART OF EMSA CLOUD-BASED SERVICES – HIGH PERFORMANCE - INTEGRATED MARITIME SERVICES)**

<b>SERVICE CLASS</b>	Integrated Maritime Services
----------------------	------------------------------

**DESCRIPTION**

The Long-Term Storage (LTS), part of the High Performance IMS (HP-IMS) project, is based on a Hybrid Cloud architecture. LTS purpose is to implement a solution capable of storing and making available to end users 5 years of positions data (AIS, LRIT, VMS). The data is stored on the cloud and made available via vessel track queries and area centric queries.

**SERVICE ACCESS**



A define group of users from Member States, EFCA and MAOC-N will have initially access to the service through a web-based graphical user interface (clone of SEG) named LTS during an initial operational phase.

The next step will be to integrate LTS in the existing SEG. SEG will call LTS for long term queries and the service should then be opened to a wider number of users.

**SERVICE DATA (OR PRODUCTS)**

Vessel positions / Dataset 2.2 (T-AIS), 2.6 (LRIT), 2.7 (SAT-AIS) and 2.8 (VMS).

<b>BUSINESS UNIT</b>
3.1 Maritime Digital Services

**RELATED AGREEMENTS AND LEGAL BASIS**

Interface and Functionality Control Document (IFCD) – section 3.4 Access rights per role (for AIS and LRIT access rights).

VMS data is provided only when there is an agreement between national IMS and fisheries control authorities.

**SERVICE KPI**

Scoreboard Activity/Service	LTS availability	
KPI indicator	Availability over a period of one year	99% (TBD)
KPI indicator	Maximum permissible period of interruption	12 hours (TBD)

1.1.10 SATELLITE AIS (SAT-AIS) DATA SERVICES

SERVICE CLASS	Integrated Maritime Services
---------------	------------------------------

DESCRIPTION

EMSA SAT-AIS data services offer a global feed of real-time SAT-AIS data from the external providers the users, participants and entities as mentioned in section “Service Access”. The SAT-AIS data services support EMSA’s critical applications, namely by:

- Exploiting the potential of the comprehensive maritime domain awareness in the remote areas of the globe;
- Contributing to the tracking of the vessels and the calculation of related ship emissions;
- Allowing tracking of ships in the polar areas;
- Improving accuracy of the Automatic Behaviour Monitoring (ABM) algorithms;
- Enhancing correlation and identification of vessels using Earth Observation (EO) based vessel;
- Detection services (VDS) and correlated positions processing;
- Providing improved identification of the potential rescue resources during deep sea operations via enhanced SARSURPIC tools.

SERVICE ACCESS



EMSA provides access to SAT-AIS service with different alternative mechanisms to retrieve vessels positionig information and complete their maritime picture:

- STAR Streaming Remote Hub - system-to-system interface which allows exchange of SAT-AIS data between EMSA and the national system in the same format as it was received, for the MS Authorities to ingest it in their national or regional Traffic Monitoring systems to complete the maritime picture

- SEG - Graphical user interface providing access to SAT-AIS data correlated and fused with other maritime information data and allows for near real time and historical querying of the information content
- IMS Mobile App – the application for mobile devices provides access to a simplified real time maritime picture similar to the SEG view but available on smart phones and tablets
- SAT-AIS is also used for the value-added services:
  - integrate the fused track of the vessel and might also be used in the generation of ABMs;
  - the generation of Vessel Detections by Copernicus maritime Surveillance Satellite imagery by excluding from the EO imagery those detections corresponding to vessels transmitting AIS;
  - The identification of potential polluters by identifying track of vessels corresponding with location and time of potential spills identified in the CleanSeaNet system.

The services follow access rights based on documents enumerated in the section “Related Agreements and Legal basis” to the following users:

- EU and EFTA Member States’ authorities with civilian responsibilities in the maritime surveillance domain
- EU institutions such as:
  - EMSA
  - EFCA
  - Frontex
  - COM (DG MOVE, DG MARE, DG ECHO, DG HOME)
- Governmental and international operational entities collaborating with EMSA:
  - EUNAVFOR
  - MAOC (N)
- EU candidate countries’ authorities
- European Neighbourhood Policy Countries’ authorities:
  - SAFEMED
  - BCSEA
  - IPA

**SERVICE DATA (OR PRODUCTS)**

2.7 SAT-AIS.

**BUSINESS UNIT**

2.2 Surveillance

**RELATED AGREEMENTS AND LEGAL BASIS**

**LEGAL BASIS**

- IMO SOLAS Regulation V/19.2.4;
- EMSA Founding regulation, as amended in 2015;
- Art 6 of EU Directive 2002/59/EC establishing a Community Vessel Traffic Monitoring and Information System; SafeSeaNet Interface and Functionalities Control Document and Regulation (EC) No 1406/2002;
- EMSA Work Programme and 5 Year Strategy

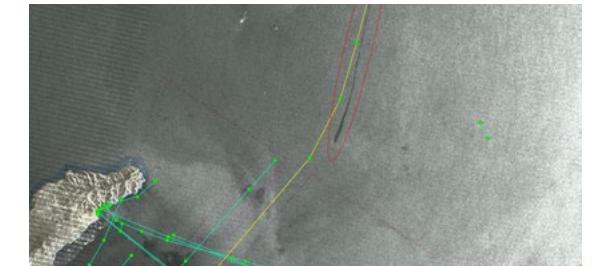
**AGREEMENTS:**

- Service Level Agreement between the European Fisheries Control Agency and the European Maritime Safety Agency;
- Service Level Agreement between Frontex and EMSA for the provision of services;
- The Conditions of Use (CoU) signed between EMSA and each participant beneficiary for the provision of the CleanSeaNet service integrated with Satellite AIS data (i.a.:SAFEMED, BCSEA, IPA projects);
- Cooperation Agreement between the European Maritime Safety Agency and Maritime Analysis and Operations Centre-Narcotics;
- Data Access Agreement defining the condition for the use of SAT-AIS data provided by EMSA for the purpose of the EUNAVFOR MED operation Irini;

- Technical cooperation between EUNAVFOR (Atlanta) and EMSA for the delivery of an integrated maritime monitoring service (as amended);
- The Conditions of Use (CoU) signed between EMSA and members of the Satellite AIS Collaborative Forum Satellite.

**SERVICE KPI**

Scoreboard Activity/Service	Maritime Support Services monitoring tools / daily reports	
KPI indicator	Global SAT-AIS data stream availability (annually)	99%



**1.1.11 SAT- AIS DATA DISTRIBUTION**

<b>SERVICE CLASS</b>	Integrated Maritime Services
<b>DESCRIPTION</b>	Technical protocol for the provision of the Sat-AIS data.
<b>SERVICE ACCESS</b>	 System-To-System interface.
<b>SERVICE DATA (OR PRODUCTS)</b>	Sat-AIS data.
<b>BUSINESS UNIT</b>	3.1 Maritime Digital Services
<b>RELATED AGREEMENTS AND LEGAL BASIS</b>	VTMIS Directive – 2002/59/EC, as amended. Interface and Functionality Control Document (IFCD) – Chapters 1.6.2 and 2.4.2

SERVICE KPI		
Scoreboard Activity/Service	The service requirements are defined individually by the service level agreements or other legal basis of the respective services.	
KPI indicator	Time to respond	As per SLAs or legal basis
KPI indicator	Time to solve	As per SLAs or legal basis

1.1.12 INTEGRATED REPORTS DISTRIBUTION (IRD) - PILOT IMPLEMENTATION

**SERVICE CLASS** Integrated Maritime Services

**DESCRIPTION**

The IRD system monitors ships sailing in areas of interest and sends Integrated Ship Report (ISR) messages to users (via e.g. system interface, email, user interface) when specific events occur, such as: entry of a ship in the area, exit of a ship from the area, call of a ship in a port in the area, departure from a port in the area. This is done by configuring a “distribution service” for a specific area of interest and a specific Member State system.

The ISR is composed of information related to the ship from EMSA maritime applications (e.g. STAR-TRACKING, SSN-EIS, OVR) and from the Voyage Information Service (VIS) of the STM (Sea Traffic Management) project.

**SERVICE ACCESS**



The IRD system initially will be available to Member States participating in the Facilitation of ship to shore reporting pilot project.

Users will have access to the service through a web-based graphical user interface, e-mail as well as standardised system-to-system interfaces. The service follows all relevant agreed access rights, as defined by the data owners.

**SERVICE DATA (OR PRODUCTS)**

SSN Products (Port call data, Hazmat, Waste, Security, Bunkers, Number of persons on board, Incidents/accidents, Exemptions)

Vessel Positions (MRS, T-AIS and SAT-AIS).

**BUSINESS UNIT**

3.3 Simplification

**RELATED AGREEMENTS AND LEGAL BASIS**

The IRD system is being developed in support to the pilot project “facilitation of ship-shore reporting” which was launched under the grant agreement with DG MARE . It will also address the request from France for receiving integrated ship reports to support search and rescue activities (“IMS S2S France” project).

**SERVICE KPI**

Scoreboard Activity/Service

System under the development, not yet defined



1.1.13 ENHANCED MARITIME PICTURE VIA OGC STANDARDS - (STAR RTMPS)

SERVICE CLASS	Integrated Maritime Services
---------------	------------------------------

DESCRIPTION

Ship Tracking, Awareness and Reporting (STAR) data – Real-Time Maritime Picture Service (RTMPS) provides vessel traffic layers and filtering, based on the Open Spatial Consortium (OGC) Web Map Service (WMS) and Web Feature Service (WFS) standards.

v1.0 of RTMPS is designed based on the FRONTEX service and is expected to be deployed in June 2020.

v1.1 of RTMPS is designed based on various IMS communities and is expected to be deployed in Q1 2021.

SERVICE ACCESS



Users will have access to the service through a web-based graphical user interface (SEG), as well as standardised system-to-system interfaces for other communities including FRONTEX.

SERVICE DATA (OR PRODUCTS)

Vessel Positions: AIS/LRIT/VMS.

BUSINESS UNIT

3.3 Simplification

RELATED AGREEMENTS

SSN Interface and Functionality Control Document (IFCD).

SERVICE KPI

Scoreboard Activity/Service	STAR RTMPS	
KPI indicator	Availability over a period of one year	99%
KPI indicator	Maximum permissible period of interruption	12 hours

1.1.14 TRAFFIC DENSITY MAPPING SERVICE - TDMS

SERVICE CLASS	Vessel Positioning
---------------	--------------------

DESCRIPTION

Service to calculate and provide to the SEG users and external systems the vessels traffic density mapping data (maps).

SERVICE ACCESS



The SEG users have access rights defined by the SSN NCAs. Reference: IFCD chapter 3.4.

SERVICE DATA (OR PRODUCTS)

Traffic density maps (TDMs) are composed of the image files, raster data files and metadata files.

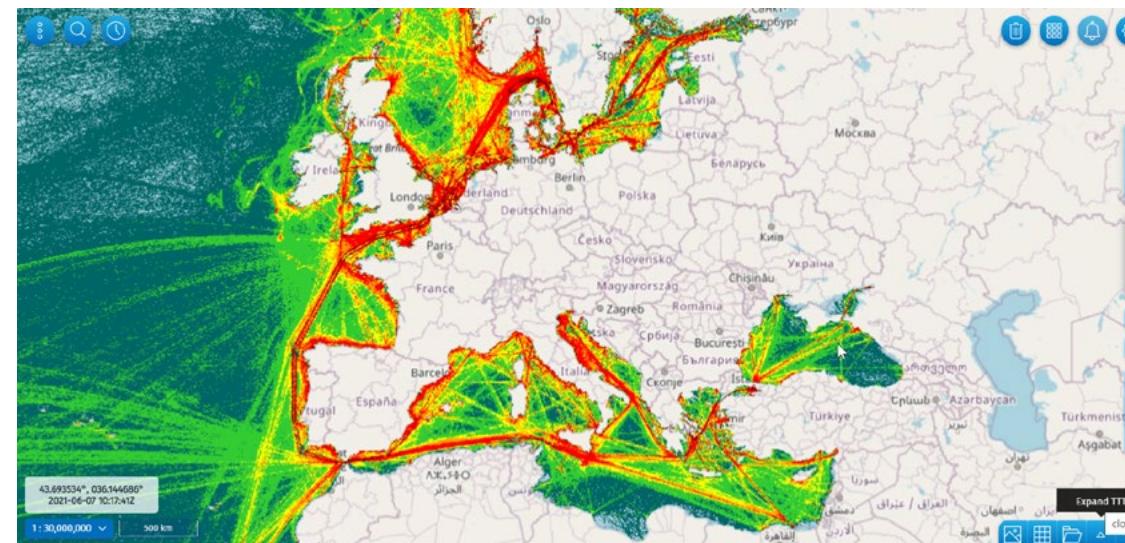
BUSINESS UNIT

3.3 Simplification

RELATED AGREEMENTS AND LEGAL BASIS

1) HLSG DM 3 and 4. 2) SLA between EMSA and DG MARE. 3) EMSA Work Programme.

SERVICE KPI		
Scoreboard Activity/Service	N/A	
KPI indicator	Time to respond	N/A
KPI indicator	Time to solve	N/A



**1.1.15 EMSA MARITIME ANALYTICS TOOL (EMAT) PROTOTYPE**

<b>SERVICE CLASS</b>	<b>Integrated Maritime Services</b>
----------------------	-------------------------------------

**DESCRIPTION**

Qlik BI is a business intelligence tool allowing tracking of the users' activity in the Integrated Maritime Services (IMS) interfaces. It is used to provide a 'prototype' services to the external users for supporting risk assessment based on the combination of position data and 'enrichment' information from other maritime applications.

**SERVICE ACCESS**



Dedicated Graphical interface – Sense and Geo-analytics.

**SERVICE DATA (OR PRODUCTS)**

2.1 MRS, 2.7 Sat-AIS, 2.2, 2.5 T-AIS, 2.6 LRIT, 6.1 – 6.3 EO products, 1.1 -1.9 SSN Enrichment.

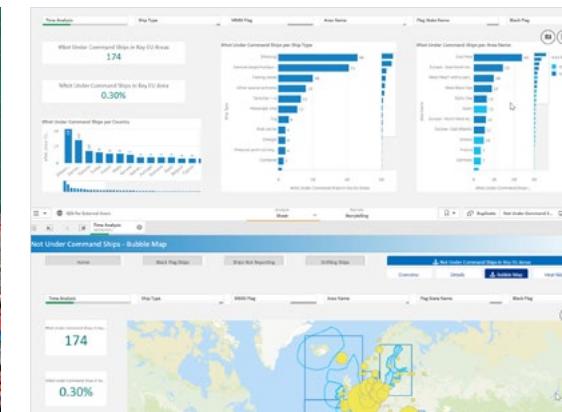
**BUSINESS UNIT**

**3.1 Digital Maritime Services & 3.3 Simplification**

**RELATED AGREEMENTS AND LEGAL BASIS**

VTMIS Directive – 2002/59/EC, as amended.

SERVICE KPI	
Scoreboard Activity/Service	N/A
KPI indicator	N/A
KPI indicator	N/A





## 1.2 DIGITAL SERVICES FOR THIRD COUNTRIES

### 1.2.1 SAFEMED V PROJECT

#### SERVICE CLASS

Integrated Maritime Services

#### DESCRIPTION

The overall objectives of the SAFEMED V project are: improved maritime safety and maritime security of ships and ports; reduced pollution by ships; improved quality of maritime training and qualification of seafarers, improved living and working conditions on board ships, and improved regional cooperation.

Beneficiary countries are provided with technical assistance aiming to build their capacity to implement properly the international maritime conventions and come closer to the EU standards in the field of maritime safety. Beneficiaries are also provided with operational support through the provision of EMSA tools such as RuleCheck, and MaKCs and services such as CleanSeaNet. They are incentivised to share their AIS information with some selected EU MSs through MARES.

Beneficiaries: Algeria, Egypt, Israel, Jordan, Lebanon, Libya, Morocco, Palestine and Tunisia.

#### SERVICE ACCESS



RuleCheck, MaKCs, CSN, SEG for ENP, THETIS-MED, MAR-CIS.

#### SERVICE DATA (OR PRODUCTS)

N/A

**BUSINESS UNIT**

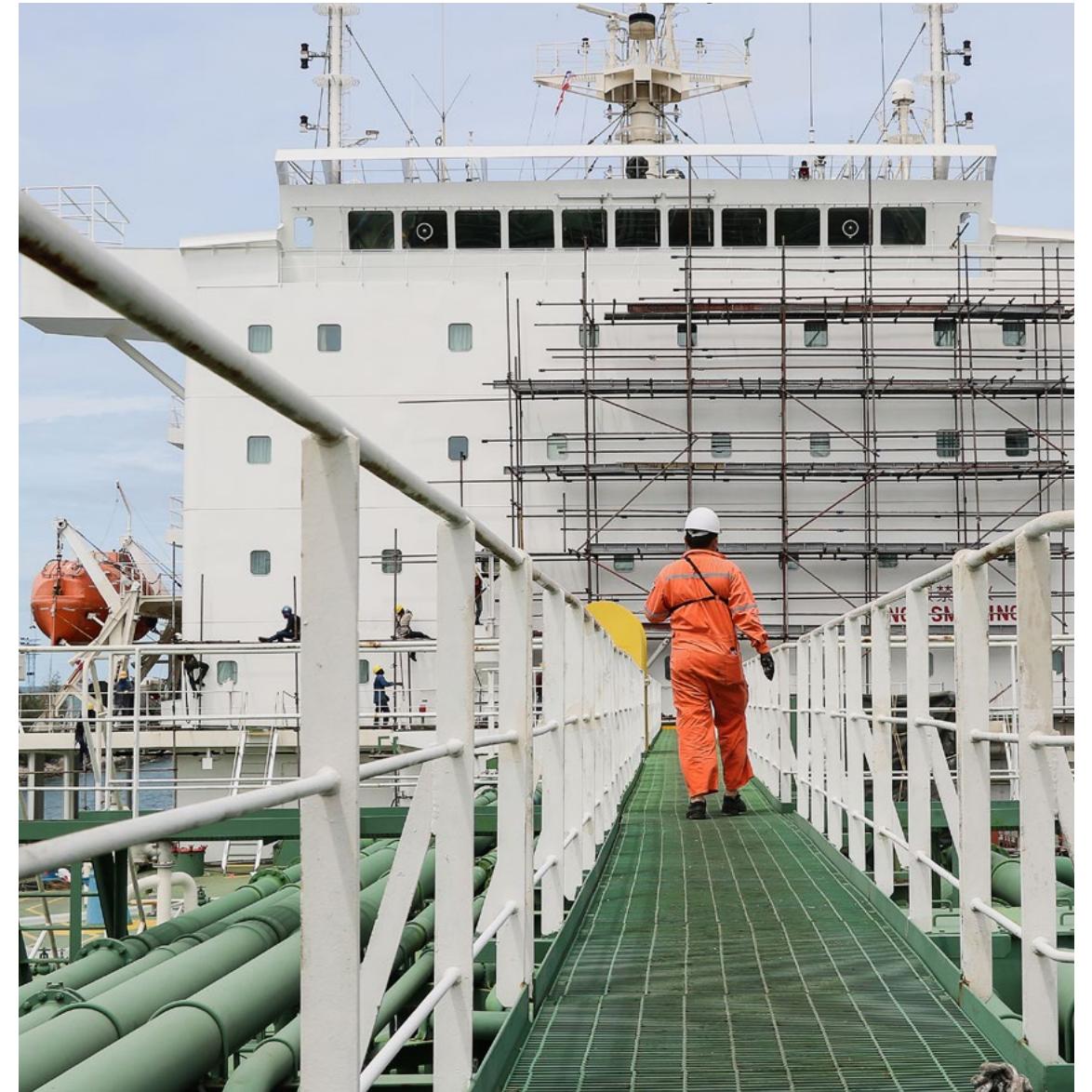
1.3 Capacity Building

**RELATED AGREEMENTS AND LEGAL BASIS**

Grant Agreement with the Commission for the SAFEMED V project ( 2022/431-459).

**SERVICE KPI**

Scoreboard Activity/Service	Training and Cooperation, Capacity Building	
KPI indicator	Implementation ratio of planned technical assistance activities according to agreed schedules	At least 80%
KPI indicator	Number of participants completing training sessions	At least 90
KPI indicator	Customer satisfaction for training sessions	At least 80%
KPI indicator	Customer satisfaction for other activities	At least 80%



**1.2.2 PREPARATORY MEASURES FOR FUTURE PARTICIPATION OF RELEVANT IPA II COUNTRIES IN EUROPEAN MARITIME SAFETY AGENCY (EMSA)**

<b>SERVICE CLASS</b>	<b>Integrated Maritime Services</b>
<b>DESCRIPTION</b>	
<p>The overall objective of the IPA project is to: support the participation of IPA II countries in EMSA work and provide beneficiaries with technical support to transpose into the national legislations the EU maritime acquis. Beneficiaries are also provided with operational support through the provision of EMSA tools such as RuleCheck, and MaKCs and services such as CleanSeaNet. They are incentivised to share their AIS information with some selected EU MSs through MARES.</p> <p>Beneficiaries: Albania, Bosnia-Herzegovina, Montenegro, North Macedonia, Serbia, Türkiye.</p>	
<b>SERVICE ACCESS</b>	
	RuleCheck, MaKCs, CSN, SEG.
<b>SERVICE DATA (OR PRODUCTS)</b>	
N/A	
<b>BUSINESS UNIT</b>	
<b>1.3 Capacity Building</b>	
<b>RELATED AGREEMENTS AND LEGAL BASIS</b>	

Grant Agreement with the Commission for the IPA project (ENI/ 2019/410-086).

SERVICE KPI		
Scoreboard Activity/Service	Training and Cooperation, Capacity Building	
KPI indicator	Implementation ratio of planned technical assistance activities according to agreed schedules	At least 80%
KPI indicator	Number of participants completing training sessions	At least 50
KPI indicator	Customer satisfaction for training sessions	At least 80%
KPI indicator	Customer satisfaction for other activities	At least 80%



1.2.3 BCSEA II PROJECT

SERVICE CLASS	Integrated Maritime Services
DESCRIPTION	<p>The overall objectives of the BCSEA II project are to: improve maritime safety and maritime security of ships and port facilities; reduce pollution to the marine environment; improve the level of maritime training and qualification of seafarers; and, improve living and working conditions on board ships.</p> <p>Beneficiary countries are provided with technical assistance aiming to build their capacity to implement properly the international maritime conventions and come closer to the EU standards in the field of maritime safety. Beneficiaries are also provided with operational support through the provision of EMSA tools such as RuleCheck, and MaKCs and services such as CleanSeaNet. They are incentivised to share their AIS information with some selected EU MSs through MARES.</p> <p>Beneficiaries: Azerbaijan, Georgia, Iran, Kazakhstan, Moldova, Türkiye, Turkmenistan, Ukraine.</p>
SERVICE ACCESS	 RuleCheck, MaKCs, CSN, SEG for ENP, MAR-CIS.
SERVICE DATA (OR PRODUCTS)	N/A
BUSINESS UNIT	1.3 Capacity Building

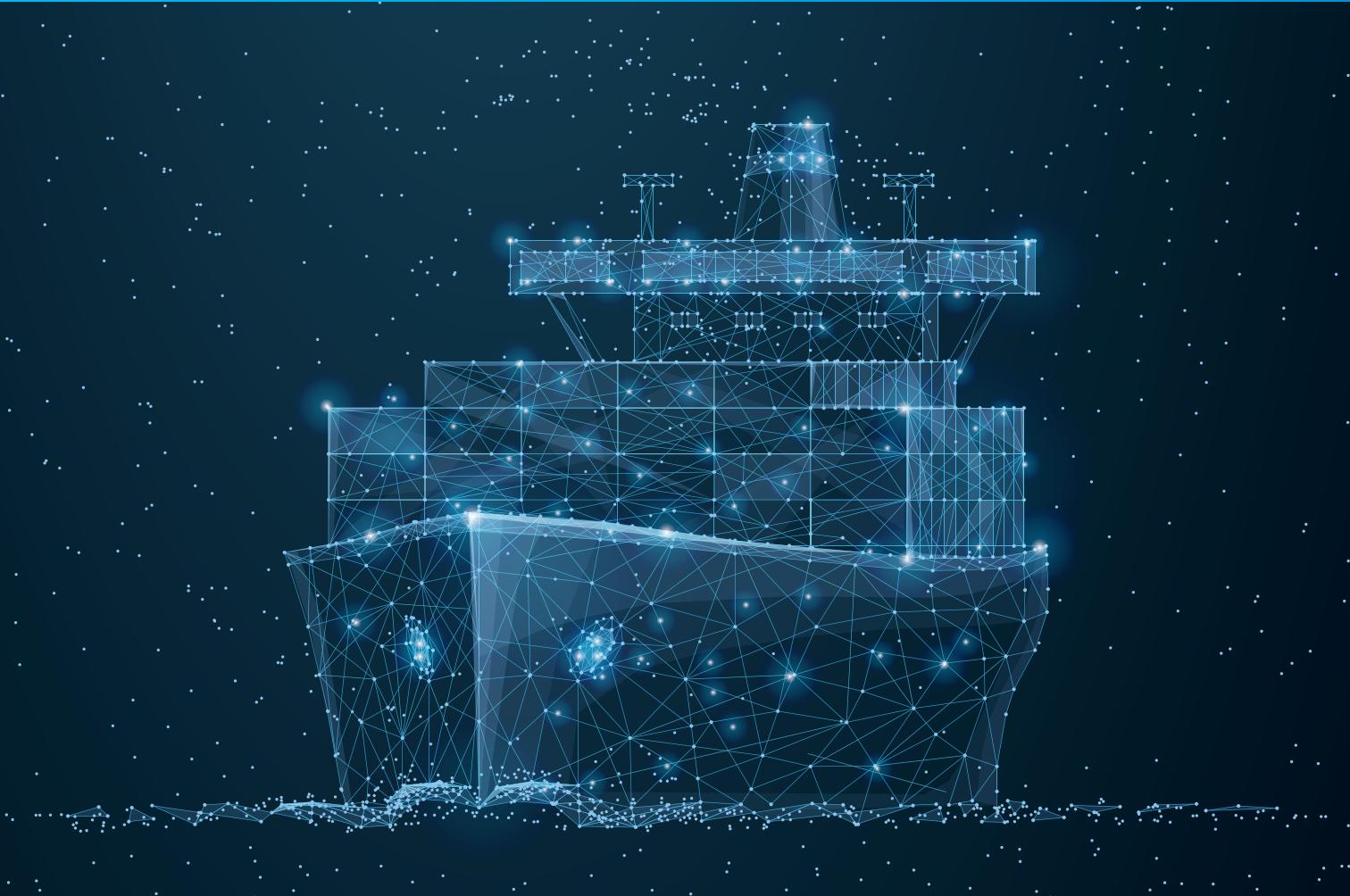
RELATED AGREEMENTS AND LEGAL BASIS

Grant Agreement with the Commission for the BCSEA project (ENI/ 2016/374-999).

SERVICE KPI

Scoreboard Activity/Service	Training and Cooperation, Capacity Building	
KPI indicator	Implementation ratio of planned technical assistance activities according to agreed schedules	At least 80%
KPI indicator	Number of participants completing training sessions	At least 70
KPI indicator	Customer satisfaction for training sessions	At least 80%
KPI indicator	Customer satisfaction for other activities	At least 80%





## 1.3 CENTRAL REFERENCE DATABASES

### 1.3.1 CENTRAL SHIP DATABASE (CSD)

#### SERVICE CLASS

Central Reference Databases

#### DESCRIPTION

The objective of CSD is to develop a reliable and flexible source of ship data which will support Member States authorities and EU agencies in the execution of their tasks (e.g. PSC inspections, vessel traffic monitoring, fisheries control, border control, law enforcement, navy, customs).

The CSD is meant to be used as a reference for ship identification information and ship particulars by all maritime applications of the SSN ecosystem as well as national systems of the Member States.

To build a complete and up-to-date database, the information should stem from several sources including EMSA maritime application, MS systems and commercial data providers.

#### SERVICE ACCESS



Users have access to the service through a web-based graphical user interface as well as standardised system-to-system interfaces.

In accordance with the Interface and Functionalities Control Document (IFCD), ship data is available to users from EU Member States' authorities executing functions in the maritime domain, Ports, EMSA, EC and other EU bodies.

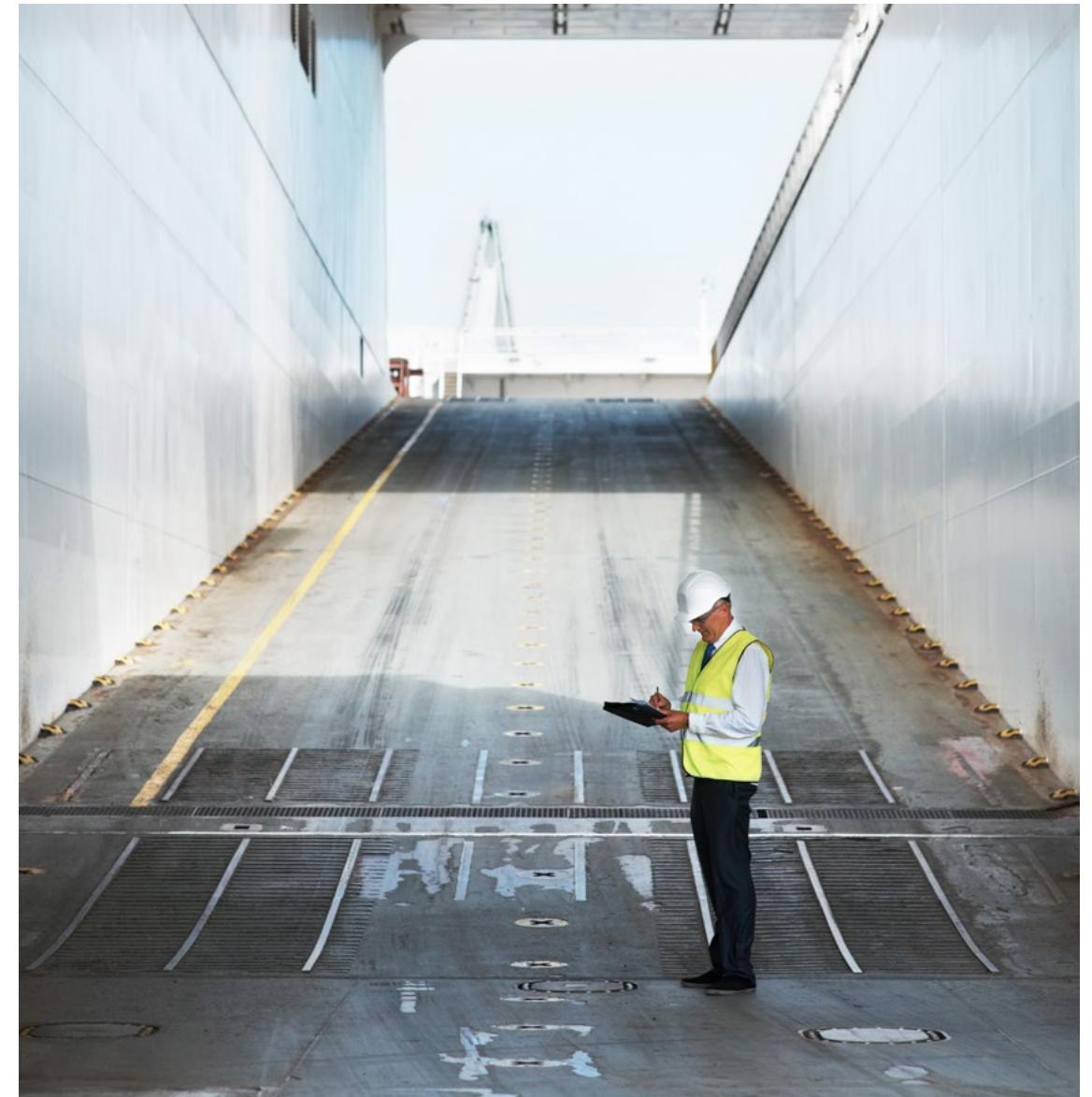
#### SERVICE DATA (OR PRODUCTS)

EMSA Central Reference Databases / Dataset 3.4 Central Ship Database.

<b>BUSINESS UNIT</b>
<b>3.3 Simplification</b>
<b>RELATED AGREEMENTS AND LEGAL BASIS</b>

Interface and Functionality Control Document (IFCD) – section 5.2.3 Reference Database Management

<b>SERVICE KPI</b>		
Scoreboard Activity/Service	Central Ship Database (CSD) availability	
KPI indicator	Availability over a period of one year	99 %
KPI indicator	Maximum permissible period of interruption	12 hours



1.3.2 CENTRAL GEOGRAPHICAL DATABASE (CGD)

SERVICE CLASS	Central Reference Databases
---------------	-----------------------------

DESCRIPTION

The Central Geographical Database (CGD) is the consolidated repository of reference areas available for all EMSA applications and operations. Central Geographical Database (CGD) makes part of the IMDatE (IMS) technical platform. The CGD contains, among others:

- The areas of responsibility for the organizations/authorities registered in the Central Organizations Database (COD);
- Areas for Earth Observation – CleanSeaNet service-related alerting;
- Fishing and other specific areas provided by European Fisheries Control Agency (EFCA);
- Specific areas requested by IMS Member States, for instance, Ballast water exchange areas (OSPAR<sup>1)</sup>), own operational areas, EEZ, SRR, etc;

The data scope as well as the access rights for specific areas are defined by the data owners and reflected in the graphical interface(s). CGD areas are provided various EMSA user communities based on their business scope and uploaded by the EMSA CGD admin.

SERVICE ACCESS



The CGD areas can be displayed via the IMS Graphical Interface (SEG). The CGD implements the OGC Web Feature Service (WFS) that can be used by any external application to retrieve and update reference geographical area information in a standard format.

1) OSPAR is the mechanism by which 15 Governments & the EU cooperate to protect the marine environment of the North-East Atlantic. It combines and up-dates the 1972 Oslo Convention on dumping waste at sea and the 1974 Paris Convention on land-based sources of marine pollution. More information is available here: <https://www.ospar.org/>

SERVICE DATA (OR PRODUCTS)

3.1 Central Geographical Database (CGD)

BUSINESS UNIT

3.1 Digital Maritime Services & 3.3 Simplification

RELATED AGREEMENTS AND LEGAL BASIS

VTMIS Directive 2002/59/EC, as amended by the Directive 2014/100/EU (Annex III – 2.3); SSN Interface and Functionalities Control Document – sections: 2.4 Additional system functionalities; 2.4.2 Integrated Maritime Services (IMS) Functionalities.

SERVICE KPI

Scoreboard Activity/Service	CGD	
KPI indicator	percentage per year availability of CGD	99%
KPI indicator	hours maximum continuous downtime of CGD platform	12 max
KPI indicator	percentage per year availability to Member States	99%

1.3.3 CENTRAL ORGANISATION DATABASE (COD)

SERVICE CLASS	Central Reference Databases
---------------	-----------------------------

DESCRIPTION

The Central Organisation Database (COD) keeps information related to public organisations, such as local and national authorities, and private companies and contractors, involved with the SafeSeaNet Ecosystem.

The initial purpose of the Central Organisation Database (COD) was to serve as the Shore-based Traffic Monitoring Infrastructure Database (STMID) which is meant to simplify and facilitate sharing of information regarding the authorities and coastal stations which have been designated by Member States in accordance with Article 22 of Directive 2002/59/EC.

Currently the COD serves also as a reference repository of organisations for configuring user accounts of EMSA applications (each user belongs to an organisation from COD).

SERVICE ACCESS



Users have access to the service through a web-based graphical user interface as well as standardised system-to-system interfaces.

In accordance with the Interface and Functionalities Control Document (IFCD), organisation data is available to EU Member States' authorities executing functions in the maritime domain, Ports, EMSA, EC and other EU bodies users.

SERVICE DATA (OR PRODUCTS)

EMSA Central Reference Databases / Data set 3.3 Central Organisation Database

BUSINESS UNIT

3.3 Simplification

RELATED AGREEMENTS AND LEGAL BASIS

Article 22 of the Directive 2002/59/EC as amended

Interface and Functionality Control Document (IFCD) – section 5.2.3 Reference Database Management

SERVICE KPI

Scoreboard Activity/Service	Central Organisation Database (COD) availability	
KPI indicator	Availability over a period of one year	99%
KPI indicator	Maximum permissible period of interruption	12 hours

1.3.4 CENTRAL LOCATION DATABASE (CLD)

SERVICE CLASS	Central Reference Databases
---------------	-----------------------------

DESCRIPTION

The Central Location Database (CLD) is used as a reference for locations by all maritime applications of the SSN ecosystem as well as national systems of the Member States.

The CLD includes all LOCODEs listed in UN/LOCODE list, SSN specific locations as well as port facilities information stemming from the IMO Maritime Security module of the Global Integrated Shipping Information System (GISIS).

SERVICE ACCESS



Users have access to the service through a web-based graphical user interface as well as standardised system-to-system interfaces.

In accordance with the Interface and Functionalities Control Document (IFCD), location data is available to EU Member States' authorities executing functions in the maritime domain, Ports, EMSA, EC and other EU bodies users.

SERVICE DATA (OR PRODUCTS)

EMSA Central Reference Databases / Data set 3.2 Central Location Database.

BUSINESS UNIT

3.3 Simplification

RELATED AGREEMENTS AND LEGAL BASIS

Interface and Functionality Control Document (IFCD) – section 5.2.3 Reference Database Management

SERVICE KPI

Scoreboard Activity/Service	Central Location Database (CLD) availability	
KPI indicator	Availability over a period of one year	99%
KPI indicator	Maximum permissible period of interruption	12 hours

1.3.5 CENTRAL HAZMAT DATABASE - CHD

SERVICE CLASS	Central Reference Databases
---------------	-----------------------------

DESCRIPTION

The Central Hazmat Database (CHD) includes a list of dangerous and polluting goods that must be notified in accordance with Directive 2002/59/EC, as amended, and IMO FAL Form 7, taking into consideration the relevant data elements from the IMO Conventions and Codes.

The CHD may be used as a reference and a verification tool during the reporting of HAZMAT for SSN at central or at national level.

It provides also access to the marine chemical information sheets (MAR-CIS) database of associated hazards and risks of dangerous and polluting products.

SERVICE ACCESS



Access is freely available to any interested party through a web-based graphical user interface.

A system-to-system interface is also available to EU Member States' authorities executing functions in the maritime domain, Ports, EMSA, EC and other EU bodies users.

SERVICE DATA (OR PRODUCTS)

EMSA Central Reference Databases / Data set 3.5 Central Hazmat Database

BUSINESS UNIT

3.3 Simplification

RELATED AGREEMENTS AND LEGAL BASIS

Article 13 of Directive 2002/59/EC as amended

Article 16 of Regulation 2019/1239

Interface and Functionality Control Document (IFCD) – section 5.2.3 Reference Database Management

SERVICE KPI

Scoreboard Activity/Service	Central Organisation Database (CHD) availability	
KPI indicator	Availability over a period of one year	99%
KPI indicator	Maximum permissible period of interruption	12 hours

**1.3.6 CENTRAL COUNTRY DATABASE – (CCD)**

<b>SERVICE CLASS</b>	<b>Integrated Maritime Services</b>
----------------------	-------------------------------------

**DESCRIPTION**

The Central Country Database (CCD) is used as a reference for countries by all maritime applications of the SSN ecosystem as well as national systems of the Member States.

**SERVICE ACCESS**



Access is freely available to any interested party through a web-based graphical user interface.

**SERVICE DATA (OR PRODUCTS)**

EMSA Central Reference Databases

**BUSINESS UNIT**

**3.3 Simplification**

**RELATED AGREEMENTS AND LEGAL BASIS**

Interface and Functionality Control Document (IFCD) – section 5.2.3 Reference Database Management

**SERVICE KPI**

Scoreboard Activity/Service	Central Country Database (CCD) availability	
KPI indicator	N/A	99%
KPI indicator	N/A	12 hours



### 1.3 SURVEILLANCE SERVICES

#### 1.4.1 CLEANSEANET (CSN)

SERVICE CLASS

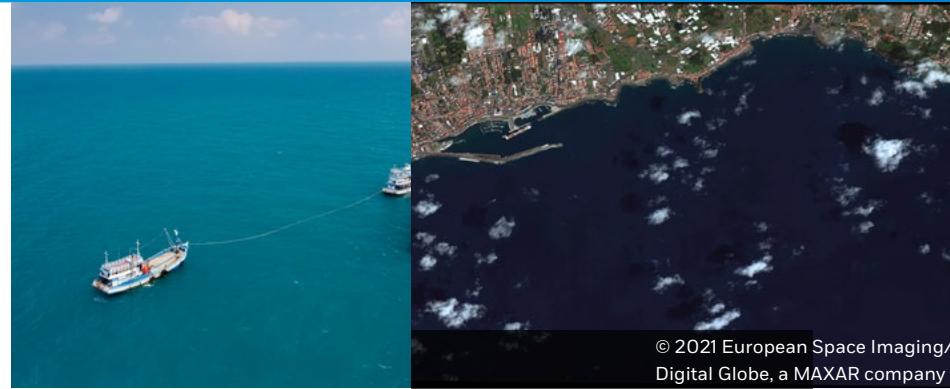
Earth Observation

DESCRIPTION

The CleanSeaNet is a European satellite-based oil spill and vessel detection service which offers assistance to participating States for the following activities:

- Identifying and tracing oil pollution on the sea surface;
- Monitoring accidental pollution during emergencies and
- Contributing to the identification of polluters.

The CleanSeaNet service is based on the regular ordering of Synthetic Aperture Radar (SAR) satellite images, providing night and day worldwide coverage of maritime areas independent of fog and cloud cover. Data from these satellites is processed into images and analysed for oil spill, vessel detection and meteorological variables. The information retrieved includes among others: spill location, spill area and length, confidence level of the detection and supporting information on the potential source of the spill (i.e. detection of vessels and oil and gas installations). Optical satellite images can also be acquired upon request, depending on the situation and user's needs. When a possible oil spill is detected in European waters, an alert message is sent to coastal States. Analysed images are available to national contact points in near-real time and are sent to the national authorities who then follow up on the alert report. CleanSeaNet's near-real time service capabilities are crucial to a rapid response by coastal states as well as to increase the likelihood of catching the polluter red-handed. In case of oil spill related accidents or emergencies the affected coastal State can request additional satellite images to monitor the spill area over an extended period of time, capturing the evolution of the spill and supporting response and recovery operations.



© 2021 European Space Imaging/ Digital Globe, a MAXAR company

**SERVICE ACCESS**



The service is made available through the following channels:

- SafeSeaNet Ecosystem Graphical User Interface (SEG);
- System to system interfaces to EMSA's Earth Observation Data Centre;
- Alert reports and notifications sent to users.

**SERVICE PRODUCTS**

6.1 CleanSeaNet products.

**BUSINESS UNIT**

2.2 Surveillance

**RELATED AGREEMENTS AND LEGAL BASIS**

Directive 2005/35/EC (since amended by Directive 2009/123/EC) on ship-source pollution and on the introduction of penalties, including criminal penalties, for pollution offences. The Directive tasks EMSA to “work with the member states in developing technical solutions and providing technical assistance in actions such as tracing discharges by satellite monitoring and surveillance”.

**SERVICE KPI**

KPI indicator	CleanSeaNet service earth observation (EO) image delivery	90%
KPI indicator	Assistance for accidental spills	100%
KPI indicator	Participation in oil spill response exercises	100%
KPI indicator	Earth Observation Data Centre operational availability	97.5%

1.4.2 COPERNICUS MARITIME SURVEILLANCE (CMS)

SERVICE CLASS	Earth Observation
---------------	-------------------

DESCRIPTION

Copernicus is a European Union Programme aimed at developing European information services based on satellite Earth Observation (EO) and in-situ (non-space) data. The CMS service supports monitoring of human activity at sea for a range of functions, including amongst others fisheries control, maritime safety and security, marine environment pollution monitoring, customs, law enforcement and support to international organisations. The CMS service can be accessed by European Union (EU) and European Free Trade Association (EFTA) national administrations with responsibilities at sea, as well as relevant EU bodies and institutions.

SERVICE ACCESS



The service is made available through the following channels:

- SafeSeaNet Ecosystem Graphical User Interface (SEG)
- System to system interfaces to EMSA's Earth Observation Data Centre
- Alert reports and notifications sent to User.

SERVICE PRODUCTS

6.3 Copernicus Maritime Surveillance products.

BUSINESS UNIT

2.2 Surveillance

RELATED AGREEMENTS AND LEGAL BASIS

Copernicus is a European Union Programme aimed at developing European information services based on satellite Earth Observation and in-situ (non-space) data. The program was established by Regulation (EU) No 377/2014 and is coordinated and managed by the European Commission.

EMSA is the entrusted entity that implements CMS on behalf of the European Commission (DG-DEFIS) as defined in the Contribution Agreement signed between both institutions.

SERVICE KPI

KPI indicator	Number of Member States National Administrations, EU institutions and international organisations using the service (2020)	56
KPI indicator	Percentage per year EO image delivery ratio	90%



1.4.3 RPAS SERVICES

SERVICE CLASS	Remotely Piloted Aircraft Systems
---------------	-----------------------------------

DESCRIPTION

EMSA RPAS services, through a portfolio of Remotely Piloted Aircraft Systems contracted by EMSA to the industry, assist Member State authorities and EU institutions involved in maritime surveillance including, aircraft, staff to pilot and maintain the aircraft and payload, logistical costs on site for:

- Multipurpose maritime surveillance – Coast Guard Functions
- Emission monitoring - Air Emissions (SOx and NOx)
- Support to Pollution response operations on EMSA OPRV

Under command of the maritime administration requesting the service, this is a complementary tool in the overall surveillance chain which includes satellite imagery, vessel positioning information and surveillance by national manned maritime patrol aircraft and vessels, the RPAS service increases the maritime situational awareness with additional sources of data.

The data sources are made available live to the users through the RPAS Data Centre application contracted as a service to the industry and which connects to EMSA systems to exchange data.

SERVICE ACCESS



Users have access to the service through a web-based graphical user interface as well as a system-to-system interface to EMSA systems for a sub-set of the data collected (RPAS-AIS and THETIS - EU reports on emissions). The service follows all relevant agreed access rights, as defined by the data owners.

SERVICE DATA

- Dataset 5.2 THETIS - EU Sulphur emissions
- Dataset 8.1 Asset Details
- Dataset 8.2 Asset Deployment
- Dataset 8.3 Asset Position, speed, course, etc.
- Dataset 9.1 Video and images (optical and IR)
- Dataset 9.2 Radar images
- Dataset 9.3 Radar derived vessel tracks
- Dataset 9.4 AIS data
- Dataset 9.5 Distress signals
- Dataset 9.6 Gas emission concentrations.

BUSINESS UNIT

2.2 Surveillance

RELATED AGREEMENTS AND LEGAL BASIS

EMSA founding regulation 2002/59, including cooperation agreement.

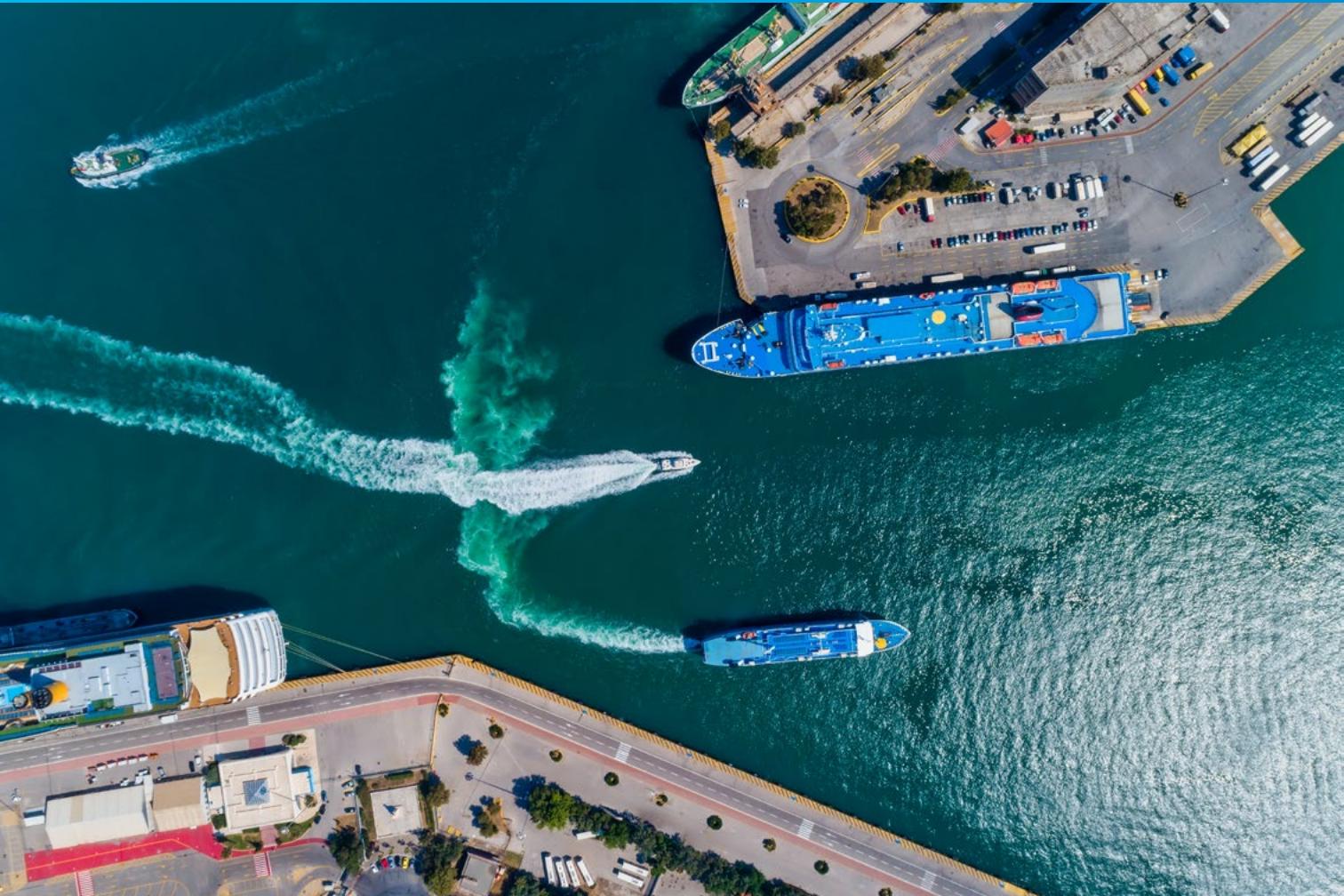


ENABLING THE FOLLOWING CORE SERVICES

THETIS - EU Sulphur

SERVICE KPI		
Scoreboard Activity/Service	RPAS Services	
KPI indicator	number of Oil Pollution Response Vessels equipped with RPAS	12
KPI indicator	number of RPAS available for deployment for multipurpose operations	6
KPI indicator	number of Deployment Days per year for multipurpose operations	600 days
KPI indicator	number of (small/medium) RPAS systems available for environmental protection (marine pollution and emissions)	14
KPI indicator	number of deployment days per year (pollution monitoring and emission monitoring)	360 days





## 1.5 VESSEL POSITIONING AND REPORTING

### 1.5.1 SAFESEANET (SSN)

SERVICE CLASS

Vessel Positioning

#### DESCRIPTION

SafeSeaNet is a specialised system established to facilitate the exchange of information in an electronic format between Member States and to provide the Commission with the relevant information in accordance with Community legislation (information on e.g. ships, voyages and port calls, dangerous and polluting goods, waste and residues, bunkers, ship security, incident reports, ship exemptions, mandatory ship reports). It is composed of a network of national SafeSeaNet systems in Member States and a SafeSeaNet central system acting as a nodal point.

#### SERVICE ACCESS



Information is made available to users from EU Member States' authorities executing functions in the maritime domain (Coastal Station, Port State Control, Waste Authority, Security Authority, Port Authority), EC and EU bodies. Access is done through a dedicated user interface or SEG as well as through system-to-system interfaces.

#### SERVICE PRODUCTS

Information on ships, voyages and port calls, dangerous and polluting goods ("hazmat"), waste and residues, bunkers, ship security, incident reports, ship exemptions, mandatory ship reports.

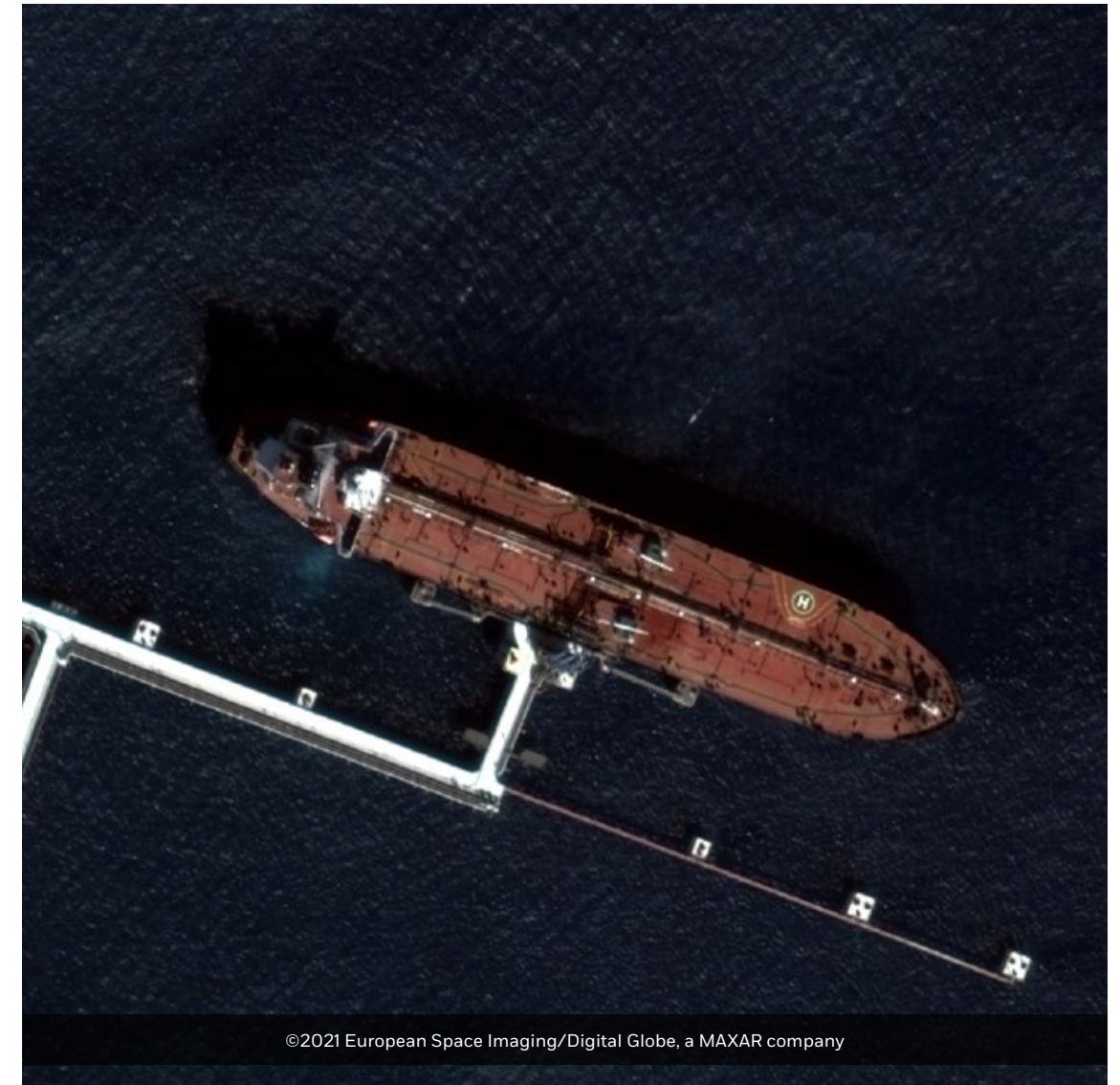
**BUSINESS UNIT**

**3.3 Simplification**

**RELATED AGREEMENTS AND LEGAL BASIS**

Directive 2002/59/EC on Vessel Traffic Monitoring,  
 Directive 2010/65/EU on Reporting Formalities,  
 Directive (EU) 2019/883 on Port Reception Facilities,  
 Directive 2009/16/EC on Port State Control,  
 Regulation (EU) 725/2004 on ship and port security,  
 Directive (EU) 98/41/EC on the registration of persons sailing on board passenger ships.  
 Interface and Functionality Control Document (IFCD) – the latest version.

SERVICE KPI		
SafeSeaNet system: Service Operation	Percentage per year availability of central SafeSeaNet system	99%
SafeSeaNet system: Service Operation	Hours maximum continuous downtime of central SafeSeaNet system	12 max
SafeSeaNet system: Reporting Performance	Percentage of notifications processed in time in accordance with SafeSeaNet IFCD requirements	99%
SafeSeaNet system: Reporting Performance	Percentage of responses to Member States' requests delivered in accordance with SafeSeaNet IFCD (time) requirements	99%



1.5.2 PROVISION OF THE SSN ENRICHED TERRESTRIAL AIS DATA VIA STAR STREAMING

SERVICE CLASS	Vessel Positioning
---------------	--------------------

DESCRIPTION

T-AIS data streaming to SSN by the regional AIS servers (NSATL, HELCOM and MARES) and/or MSs exploiting the direct connection.  
 The T-AIS data are collected by national AIS systems of the participating MSs and provided to SSN through the regional AIS servers (or directly).

SERVICE ACCESS



The users access rights to T-AIS data are defined by the SSN IFCD document.

SERVICE PRODUCTS

T-AIS data.

BUSINESS UNIT

3.3 Simplification

RELATED AGREEMENTS AND LEGAL BASIS

IFCD Chapter 2.5.2.

SERVICE KPI

Scoreboard Activity/Service	The service requirements for the regional AIS servers are defined by the service level agreements.	
KPI indicator	Time to respond	As per SLAs
KPI indicator	Time to solve	As per SLAs



**1.5.3 DISTRIBUTION OF THE SSN TERRESTRIAL AIS DATA (ENRICHED OR NON-ENRICHED) TO MS VIA STAR STREAMING**

<b>SERVICE CLASS</b>	<b>Vessel Positioning</b>
----------------------	---------------------------

**DESCRIPTION**

The constant flow of data (based on predefined criteria) between the central SSN system and the participating national systems. The service is made for distribution of AIS data submitted by MSs and enriched with information from SSN (a confirmation of the presence of voyage, Hazmat, Waste, Security and Incident Reports information in SSN), or distribution of non-enriched T-AIS data of MSs.

**SERVICE ACCESS**



The users access rights are defined by the SSN IFCD document. The NCA within each participating Member State is responsible for identifying its own SSN authorities and users at national or local level, and for assigning their roles and access rights.

**SERVICE PRODUCTS**

T-AIS data.

**BUSINESS UNIT**

**3.3 Simplification**

**RELATED AGREEMENTS AND LEGAL BASIS**

IFCD Chapter 2.5.

**ENABLING THE FOLLOWING CORE SERVICES**

SafeSeaNet.

**SERVICE KPI**

Scoreboard Activity/Service	The service requirements are defined in the SSN IFCD	
KPI indicator	Time to respond	IFCD
KPI indicator	Time to solve	IFCD

**1.5.4 EUROPEAN UNION LONG-RANGE IDENTIFICATION AND TRACKING SYSTEM COOPERATIVE DATA CENTRE (EU LRIT CDC)**

**SERVICE CLASS** Vessel Positioning

**DESCRIPTION**

Vessel position information automatically transmitted by as shipborne equipment via satellite communication networks.

**SERVICE ACCESS**



Web service, system to system, and web interface.

**SERVICE DATA**

'2.6': LRIT

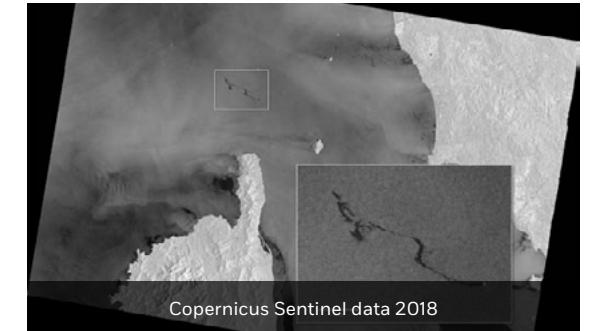
**BUSINESS UNIT**

3.3 Simplification

**RELATED AGREEMENTS AND LEGAL BASIS**

Resolution MSC.202(81), adopted on 19 May 2006, amends the International Convention for the Safety of Life at Sea, 1974, as amended, by including Regulation 19-1 Long-range identification and tracking of ships.

SERVICE KPI		
Scoreboard Activity/Service	Long-range identification and tracking system - Technical documentation (Part I), MSC.1/Circ.1259 rev8	
KPI indicator	Percentage per month availability EU LRIT Data Centre	99%
KPI indicator	Maximum continuous downtime	4 hours
KPI indicator	Percentage position reports delivered in accordance with IMO requirements (periodic reports: 15 min; polls: 30 min)	99%
KPI indicator	Percentage per year availability to users	99%



**1.5.5 INTERNATIONAL LONG-RANGE IDENTIFICATION AND TRACKING SYSTEM DATA EXCHANGE (LRIT IDE)**

<b>SERVICE CLASS</b>	<b>Vessel Positioning</b>
----------------------	---------------------------

**DESCRIPTION**

The International LRIT Data Exchange (LRIT IDE) is a message handling service that facilitates the exchange of LRIT information amongst LRIT Data Centres to enable LRIT Data Users to obtain that LRIT information that they are entitled to receive. The IDE routes messages between LRIT DCs

**SERVICE ACCESS**



Web service and web interface.

**SERVICE DATA**

'2.6' - The IDE stores and archives LRIT message header information in a Journal(s) for audit, billing, and statistical analysis purposes.

**BUSINESS UNIT**

**3.3 Simplification**

**RELATED AGREEMENTS AND LEGAL BASIS**

Resolution MSC.202(81), adopted on 19 May 2006, amends the International Convention for the Safety of Life at Sea, 1974, as amended, by including Regulation 19-1 Long-range identification and tracking of ships.

SERVICE KPI		
Scoreboard Activity/Service	Long-range identification and tracking system - Technical documentation (Part I), MSC.1/Circ.1259 rev.8 Continuity of service plan for the LRIT system, MSC.1/Circ.1376 rev.3	
KPI indicator	Availability measured over a year and better than	99.9%
KPI indicator	Maximum continuous downtime less than	4 hours
KPI indicator	Availability measured in any one day over and better	95%



Grounding of M/V Rinella M near Barbarinac Island (Croatia) on 0

## 1.6 SHIP SAFETY AND POLLUTION PREVENTION

### 1.6.1 EUROPEAN MARINE CASUALTY INFORMATION PLATFORM (EMCIP)

SERVICE CLASS

Ship safety and pollution prevention

DESCRIPTION

EMCIP provides the means to store data and information related to marine casualties and incidents involving all types of ships including occupational accidents related to ship operations. It also enables the production of statistics and analysis of the technical, human, environmental and organisational factors involved in accidents at sea. EMCIP is provided with a query engine, export tools and a graphical interface supporting data analysis. EMCIP is also connected to the Global Integrated Shipping Information System (GISIS) managed by the International Maritime Organisation, thus supporting the dissemination of investigation data reported by the EU/EEA MS at a global level.

SERVICE ACCESS



Access to the EMCIP is granted to staff authorised by Investigative Bodies or by other entitled Authorities of the EU Member States. Authorized users have access to the service through the EMSA MAP. Information about marine casualties and incidents, such as the investigation reports and “anonymized” data about the notified occurrences, is also made accessible to the public via the EMSA website. The service follows all relevant agreed access rights, as defined by the data owners.

SERVICE DATA

For all the notified occurrences, the dataset includes,

- ship and voyage particulars;
- environment conditions;
- casualty data, including date and time and type of the event;
- consequences to people, ship and environment.

Moreover, for investigated occurrences, additional information includes data relating to the sequence of accidental events, the identification of contributing factors, including human factors and others relating to shipboard operations, shore management and regulatory influence, and any resulting safety recommendations and safety actions taken.

BUSINESS UNIT

2.1 Safety & Security

RELATED AGREEMENTS AND LEGAL BASIS

Directive 2009/18/EC, art.17, establishing EMCIP

SERVICE KPI

Scoreboard Activity/Service	EMCIP	
KPI indicator	Percentage per year availability of EMCIP	90%
KPI indicator	Continuous downtime for maintenance (on a monthly basis), including updates, security patches, exercises	8 hours



The cargo ship BSLE Sunrise stranded at the El Saler Beach after a big storm on September 30, 2012 in Valencia, Spain.



On the night of January 1, 2019, MSC Zoe lost approximately 290 containers in heavy weather on the journey from Portugal to Bremerhaven.



1.6.2 MED DATABASE – ‘MARINE EQUIPMENT DIRECTIVE DATABASE’

SERVICE CLASS	Ship safety and pollution prevention
DESCRIPTION	
<p>The MED Database contains information on products which have been certified by Notified Bodies under the European Marine Equipment Directive (MED). This includes products which can be currently found in the market, but also products which have been in the market in the past and still can be found on board EU flagged ships in operation. This system, with currently registered more than 200.000 datasets is used worldwide as a unique reference list of the MED approved equipment by more than 7.000 users including the Maritime Administration and the maritime industry. The newly upgraded tool supports also the implementation of the e-Tag and facilitates access to the Declaration of Conformity (DoC). EMSA MED mobile application makes integral part of the system and is available for a free download in the Google Play and Apple Store.</p>	
SERVICE ACCESS	



<https://portal.med.emsa.europa.eu/>  
 web-portal; mobile-app; (planned:system2system).

SERVICE DATA

Data on the equipment certified under the MED 2014/90/EU.

BUSINESS UNIT

2.1 Safety & Security

RELATED AGREEMENTS AND LEGAL BASIS

2014/90/EU; 96/98/EC.

SERVICE KPI

Scoreboard Activity/Service	N/A	
KPI indicator	Percentage per year availability of MED Database	95%
KPI indicator	N/A	
KPI indicator	N/A	



1.6.3 THETIS - PSC

SERVICE CLASS	Ship safety and pollution prevention
DESCRIPTION	

THETIS provides a comprehensive overview of ships for inspection authorities in the Paris Memorandum of Understanding (PMoU) area, to guide and support the inspection process.

THETIS is an information system, hosted, maintained and operated by EMSA, developed to support the PMoU's New Inspection Regime for Port State Control. This service provides users with functionalities for reporting, consulting, correction and publication of inspection reports.

THETIS stores and processes ship call information; calculates the Ship Risk Profile and Priority for each ship in the database on a daily basis; organises the workflow from call to inspection, report and follow up action; and provides and publishes information. The system receives ship arrival and departure information from SafeSeaNet, and from the Canadian and Russian equivalents, which allows THETIS to work as the central system of the PMoU rather than just the EU. The system is accessible to all parties of the PMoU.

SERVICE ACCESS



EMSA portal for restricted area – free for public website, mobile client.

SERVICE DATA

THETIS database – ship/inspection.

BUSINESS UNIT

3.1 Maritime Digital Services

RELATED AGREEMENTS AND LEGAL BASIS

The port State control Directive 2009/16/EC as amended and its 3 implementing regulations form a significant part thereof.

In addition, Directive (EU) 2017/2110 provides for a system of mandatory inspections for the ro-ro ferries and high-speed passenger crafts to be carried out by EU flag States and further amends Directive 2009/16/EC introducing mandatory inspections for said ships under port State control.

An arrangement with the Paris MoU establishing the role of EMSA, detailing basic features of the system and hosting arrangements exists. This arrangement dates from May 2011, the first year of THETIS.

SERVICE KPI		
Scoreboard Activity/Service	System operational	
KPI indicator	Percentage per year availability of THETIS	96%
KPI indicator	Hours maximum continuous downtime	6 hours
Scoreboard Activity/Service	Helpdesk service	
KPI indicator	Average time in working hours for feedback on requests for user support	4 hours max
KPI indicator	Average time in working hours for feedback on requests from the public and other un-registered users	4 hours max
Scoreboard Activity/Service	Links with 3 <sup>rd</sup> party systems	
KPI indicator	Port calls provided by a webservice by member state without SSN. Inspection report by a webservice by non-EU-member states (CA and RU) Recognized Organization (RO) webservice to upload certificates information hours maximum continuous downtime	6 hours



1.6.4 THETIS - EU MARSEC

<b>SERVICE CLASS</b>	<b>Ship safety and pollution prevention</b>
----------------------	---

**DESCRIPTION**

THETIS - EU MARSEC provides a comprehensive overview of ships for EU inspection authorities to guide and support the inspection process for Maritime Security purposes (MARSEC).  
 The ISPS Code is mandatory for EU and EEA Member States. Moreover, the Regulation makes Part B of the ISPS code mandatory above the voluntary status of the part in the ISPS.

**SERVICE ACCESS**



EMSA portal for restricted area.

**SERVICE DATA**

THETIS database ship/inspection.

**BUSINESS UNIT**

**3.1 Maritime Digital Services**

**RELATED AGREEMENTS AND LEGAL BASIS**

Regulation 725/2004 is supported by THETIS-EU since January 2019.

SERVICE KPI		
Scoreboard Activity/Service	System operational	
KPI indicator	Percentage per year availability of THETIS	96%
KPI indicator	Hours maximum continuous downtime	6 hours
Scoreboard Activity/Service	Helpdesk service	
KPI indicator	Average time in working hours for feedback on requests for user support	4 hours max
KPI indicator	Average time in working hours for feedback on requests from the public and other un-registered users	4 hours max

1.6.5 THETIS - EU PRF

SERVICE CLASS	Ship safety and pollution prevention
---------------	--------------------------------------

DESCRIPTION

THETIS - EU PRF provides a comprehensive overview of ships for EU inspection authorities, to guide and support the inspection process regarding waste delivery at Port Reception Facilities (PRF). All ships operating in the EU area are to comply with the provisions on delivery of ship generated waste and cargo residues. The operational part of the Directive requires per-arrival notifications specifying the type and volume of waste collected on board. After delivery in port and upon departure, similar notifications have to be provided. The information shall be routed through SSN and be relayed to THETIS - EU with an aim to serve the competent authorities on the Member States when selecting ships for inspections, perform and follow-up of inspections as well as to generate statistics on volumes generated and landed.

SERVICE ACCESS



EMSA portal for restricted area.

SERVICE DATA

THETIS database – ship/inspection.

BUSINESS UNIT

3.1 Maritime Digital Services

RELATED AGREEMENTS AND LEGAL BASIS

Directive 2002/59 is supported by THETIS-EU since April 2016; the support for the subsequent Directive 2019/883 will be available as from 28 June 2021.

SERVICE KPI

Scoreboard Activity/Service	System operational	
KPI indicator	Percentage per year availability of THETIS	96%
KPI indicator	Hours maximum continuous downtime	6 hours
Scoreboard Activity/Service	Helpdesk service	
KPI indicator	Average time in working hours for feedback on requests for user support	4 hours max
KPI indicator	Average time in working hours for feedback on requests from the public and other un-registered users	4 hours max

1.6.6 THETIS - EU SRR

<b>SERVICE CLASS</b>	Ship safety and pollution prevention
<b>DESCRIPTION</b>	
<p>THETIS - EU SRR provides a comprehensive overview of ships for EU inspection authorities to guide and support the inspection process to Ship Recycling Report (SRR).</p> <p>Data emanates from ship inspections (only). No data on facilities or on Inventories of Hazardous materials is inspected, other than as part of the ship inspection. The ship inspection is also only an enforcement inspection and not an authorisation. Details of the inspection, findings and actions taken as result thereof are recorded in THETIS - EU.</p>	
<b>SERVICE ACCESS</b>	
	EMSA portal for restricted area.
<b>SERVICE DATA</b>	
THETIS database – ship/inspection.	
<b>BUSINESS UNIT</b>	
3.1 Maritime Digital Services	

RELATED AGREEMENTS AND LEGAL BASIS

Regulation 1257/2013 is supported by THETIS since August 2019 and will be further supported by THETIS EU from June 2020 which includes the relevant amendments of Directive 2009/16 on PSC.

<b>SERVICE KPI</b>		
Scoreboard Activity/Service	System operational	
KPI indicator	Percentage per year availability of THETIS	96%
KPI indicator	Hours maximum continuous downtime	6 hours
Scoreboard Activity/Service	Helpdesk service	
KPI indicator	Average time in working hours for feedback on requests for user support	4 hours max
KPI indicator	Average time in working hours for feedback on requests from the public and other un-registered users	4 hours max

1.6.7 THETIS - EU ROPAX

<b>SERVICE CLASS</b>	Ship safety and pollution prevention
----------------------	--------------------------------------

**DESCRIPTION**

THETIS - EU RoPAX provides a comprehensive overview of ships for EU inspection authorities, to guide and support the inspection process regarding to ro-ro passenger ships and high-speed passenger craft in regular service.

The enforcement inspections for foreign flagged ships fully under PSC and therefore the inspections fully assimilated and recorded in THETIS as PSC information system. Inspections performed on national flagged ships because the ship either operates domestically, or between a homeport and a non-EU port do not come under PSC and therefore have to be recorded separately. The application to be used is THETIS - EU RoPAX.

These inspections relate to enforcement inspections and are not Flag State surveys related to the validity of statutory certificates.

**SERVICE ACCESS**



EMSA portal for restricted area.

**SERVICE DATA**

THETIS database – ship/inspection.

**BUSINESS UNIT**

3.1 Maritime Digital Services

**RELATED AGREEMENTS AND LEGAL BASIS**

Regulation 1257/2013 is supported by THETIS since August 2019 and will be further supported by THETIS EU from June 2020 which includes the relevant amendments of Directive 2009/16 on PSC.

**SERVICE KPI**

Scoreboard Activity/Service	System operational	
KPI indicator	Percentage per year availability of THETIS	96%
KPI indicator	Hours maximum continuous downtime	6 hours
Scoreboard Activity/Service	Helpdesk service	
KPI indicator	Average time in working hours for feedback on requests for user support	4 hours max
KPI indicator	Average time in working hours for feedback on requests from the public and other un-registered users	4 hours max

1.6.8 THETIS - EU SULPHUR

SERVICE CLASS	Ship safety and pollution prevention
---------------	--------------------------------------

DESCRIPTION

THETIS EU – Sulphur provides a comprehensive overview of ships for EU inspection authorities, to guide and support the inspection process harmonised approach for the inspection of ships, ascertaining their compliance, identifying non-compliances and applying control procedures for the enforcement, as regards the sulphur content of marine fuels (hereafter referred to as ‘the Directive’). THETIS - EU is an information system, hosted, maintained and operated by EMSA, developed to support the competent authorities. This service provides users with functionalities for reporting, consulting and correction of inspection reports.

SERVICE ACCESS



EMSA portal for restricted area, mobile client.

SERVICE DATA

THETIS database – ship/inspection.

BUSINESS UNIT

3.1 Maritime Digital Services

RELATED AGREEMENTS AND LEGAL BASIS

Directive (EU) 2016/802 (codified Council Directive 1999/32/EC as amended).

SERVICE KPI

Scoreboard Activity/Service	System operational	
KPI indicator	Percentage per year availability of THETIS	96%
KPI indicator	Hours maximum continuous downtime	6 hours
Scoreboard Activity/Service	Helpdesk service	
KPI indicator	Average time in working hours for feedback on requests for user support	4 hours max
KPI indicator	Average time in working hours for feedback on requests from the public and other un-registered users	4 hours max
Scoreboard Activity/Service	Links with 3 <sup>rd</sup> party systems	
KPI indicator	Air emission report provided by a webservice by member state - hours maximum continuous downtime	6 hours

1.6.9 THETIS - EU ANIMAL WELFARE

SERVICE CLASS	Ship safety and pollution prevention
---------------	--------------------------------------

DESCRIPTION

THETIS - EU Animal Welfare to support inspections of livestock vessels aimed at safeguarding animal welfare within the context of Regulation (EC) No 1/2005. Inspectors can report their inspections on a voluntary basis in THETIS - EU.

The animal welfare inspection module allows veterinarian inspectors to target the ships to be inspected, declare non compliances, declare certificates of approval of livestock vessels and generate inspection reports.

SERVICE ACCESS



EMSA portal for restricted area, mobile client.

SERVICE DATA

THETIS database – ship/inspection.

BUSINESS UNIT

3.1 Maritime Digital Services

RELATED AGREEMENTS AND LEGAL BASIS

Service Level Agreement for the support of the implementation of Council Regulation (EC) No 1/2005 of 22 December 2004 on the protection of animals during transport and related operations.

SERVICE KPI

Scoreboard Activity/Service	System operational	
KPI indicator	Percentage per year availability of THETIS	96%
KPI indicator	Hours maximum continuous downtime	6 hours
Scoreboard Activity/Service	Helpdesk service	
KPI indicator	Average time in working hours for feedback on requests for user support	4 hours max
KPI indicator	Average time in working hours for feedback on requests from the public and other un-registered users	4 hours max

1.6.10 THETIS - ECERTIFICATES

SERVICE CLASS	Ship safety and pollution prevention
---------------	--------------------------------------

DESCRIPTION

THETIS - eCertificates provides users of THETIS a complete overview of statutory certificates, class certificates and class conditions as issued by one or more of the EU Recognised Organisations. Data received is collected by the RO's while acting on behalf of the Flag State of the ship. No filtering is performed, guaranteeing the data remains as provided. The current dataset covers metadata of the issued certificates, while since January 2020 the service is capable of handling all data recorded in the certificates and their annexes.

SERVICE ACCESS



EMSA portal for restricted area, mobile client.

SERVICE DATA

THETIS database – ship/inspection.

BUSINESS UNIT

3.1 Maritime Digital Services

RELATED AGREEMENTS AND LEGAL BASIS

Regulation 391/2009 is supported by THETIS since January 2011.

SERVICE KPI

Scoreboard Activity/Service	System operational	
KPI indicator	Percentage per year availability of THETIS	96%
KPI indicator	Hours maximum continuous downtime	6 hours
Scoreboard Activity/Service	Helpdesk service	
KPI indicator	Average time in working hours for feedback on requests for user support	4 hours max
KPI indicator	Average time in working hours for feedback on requests from the public and other un-registered users	4 hours max

1.6.11 THETIS - MED

SERVICE CLASS

Ship safety and pollution prevention

DESCRIPTION

THETIS - Med provides a comprehensive overview of ships for inspection authorities in the Mediterranean Memorandum of Understanding (MED MoU) area, to guide and support the inspection process.

THETIS is an information system, hosted, maintained and operated by EMSA, developed to support the Med MoU's for Port State Control. This service provides users with functionalities for reporting, consulting and correction of inspection reports.

THETIS stores and processes ship call information; calculates the target factor and Priority for each ship in the database on a daily basis; organises the workflow from call to inspection, report and follow up action; and provides and publishes information. The system receives ship arrival and departure information from SafeSeaNet for Cyprus and Malta and equivalent for MS subscribing to webservice. The system is accessible to all parties of the Med MoU- 10 countries + secretariat and including statistic reporting.

The public site where recorded information can be consulted using user defined search criteria.

SERVICE ACCESS



EMSA portal for restricted area, mobile client.

SERVICE DATA

THETIS database – ship/inspection.

BUSINESS UNIT

3.1 Maritime Digital Services

RELATED AGREEMENTS AND LEGAL BASIS

SAFEMED IV.

SERVICE KPI

Scoreboard Activity/Service	System operational	
KPI indicator	Percentage per year availability of THETIS	96%
KPI indicator	Hours maximum continuous downtime	6 hours
Scoreboard Activity/Service	Helpdesk service	
KPI indicator	Average time in working hours for feedback on requests for user support	4 hours max
KPI indicator	Average time in working hours for feedback on requests from the public and other un-registered users	4 hours max
Scoreboard Activity/Service	Links with 3 <sup>rd</sup> party systems	
KPI indicator	Air emission report provided by a webservice by member state - hours maximum continuous downtime	6 hours

1.6.12 THETIS - MRV

SERVICE CLASS	Ship safety and pollution prevention
---------------	--------------------------------------

DESCRIPTION

THETIS - MRV provides a comprehensive overview of ships for reporting fuel consumed on voyages from outside to ports in the Union, from ports in the Union to places outside the Union and voyages between two or more ports in the Union by the ship owner to guide and support the reporting process.

THETIS - MRV is an information system, hosted, maintained and operated by EMSA, developed to support the shipowner, certifier and EC. This service provides users with functionalities for reporting, consulting and correction of emission reports.

In THETIS - PSC inspections since 01 July 2019 shall include the MRV DoC in the document checks.

SERVICE ACCESS



EMSA portal for restricted area, mobile client.

SERVICE DATA

THETIS database – ship/inspection.

BUSINESS UNIT

1.1 Sustainability

RELATED AGREEMENTS AND LEGAL BASIS

Regulation 757/2015 is supported by THETIS - MRV since August 2017.

SERVICE KPI

Scoreboard Activity/Service	System operational	
KPI indicator	Percentage per year availability of THETIS	96%
KPI indicator	Hours maximum continuous downtime	6 hours
Scoreboard Activity/Service	Helpdesk service	
KPI indicator	Average time in working hours for feedback on requests for user support	4 hours max
KPI indicator	Average time in working hours for feedback on requests from the public and other un-registered users	4 hours max
Scoreboard Activity/Service	Links with 3 <sup>rd</sup> party systems	
KPI indicator	Air emission report provided by a webservice by member state - hours maximum continuous downtime	6 hours

1.6.13 DONA

SERVICE CLASS	Ship safety and pollution prevention
---------------	--------------------------------------

DESCRIPTION

DONA, is a stand-alone maritime application, developed, maintained and enhanced by EMSA; it has three distinguished functionalities:

1. Country Profile: A publicly available section; it will include various type of information pertaining to how Member States have organised their competent authorities responsible for their Flag, Port and Coastal State obligations;
2. Reporting Gate: A single-entry portal with restricted access, through which Member States could, if they opt to do so, report to EC in accordance with a pre-agreed list of reports and templates, to fulfil their reporting obligations under the European maritime legal acts;
3. Regular Statistics: A restricted area, available only to designated users from the Member States, being granted relevant access rights by the national focal point. EMSA will upload regularly, at intervals agreed with Member States, maritime related statistics from data sources available in EMSA. Statistics will be offered to each Member States and will not include any comparative elements among them.

SERVICE ACCESS



Via EMSA's website (to the publicly accessible area) and via EMSA's Maritime Services' Portal (public and restricted area).

SERVICE DATA

1. Information on Member States' Competent Authorities;
2. Statistics on Member States' maritime performance.

BUSINESS UNIT

1.3 Capacity Building

RELATED AGREEMENTS AND LEGAL BASIS

None.

SERVICE KPI

Scoreboard Activity/Service	No KPI's have been agreed.
KPI indicator	N/A
KPI indicator	N/A

1.3.7 MAR-CIS

SERVICE CLASS	Pollution Response and Marine Environment
---------------	---

DESCRIPTION

The MAR-CIS Marine Chemical Information Sheets are datasheets of chemical substances developed by EMSA that gather relevant information from different sources for responding to marine spills of hazardous and noxious substances (HNS). These datasheets provide concise information on the substances' physical and chemical properties, handling procedures and emergency spill response procedures, as well as maritime transport requirements for safe transport at sea.

In addition, the BE-CHEM tool, coupled to the MAR-CIS application, can theoretically estimate the physical behaviour of chemical substances once released to the environment (e.g. if it evaporates, dissolves, sinks...). The classification is based on the input of certain physical and chemical properties of the substance.

SERVICE ACCESS



Users have access to the service through a web-based graphical user interface. The service follows all relevant agreed access rights, as defined by the data owners. The users have also access to same information through an application for mobile devices (available at Google Play Store and App Store).

SERVICE DATA (OR PRODUCTS)

Dataset 3.6 MAR-CIS

BUSINESS UNIT

1.1 Sustainability

RELATED AGREEMENTS AND LEGAL BASIS

The MAR-CIS Datasheets have been developed in accordance with Regulation No 724/2004 setting a legal obligation EMSA in the field of response to ship sourced pollution within EU waters.

SERVICE KPI

Scoreboard Activity/Service	ABB 5300; KPI No.98	
KPI indicator	Number of datasheets to be produced/ revised per year - 25	%





1.7 HUMAN ELEMENT

1.7.1 STCW-IS: STANDARDS OF TRAINING, CERTIFICATION AND WATCHKEEPING INFORMATION SYSTEM

SERVICE CLASS	Human Element
---------------	---------------

DESCRIPTION

The STCW-IS is a web-based information system designed to help all those wishing to find information on the seafarers' certification and training at EU level.

In addition, it stores the findings of EMSA's visit and inspection reports to facilitate the identification of the level of implementation of Directive (EU) 2022/993, on the minimum level of training of seafarers.

Furthermore, the system gathers data on certificates and endorsements issued to seafarers by the EU Member States, Iceland and Norway. The information on the potential manpower to serve on board EU Member State flagged vessels, is published annually in EMSA's website and portal. The statistical review report is to be used as a primary source of data for statistical analysis in support of the EU Member States, the Commission and the European Parliament in policy making.

SERVICE ACCESS



Public and authorised users have access to the service through the EMSA Portal. Access to the system is also provided through a standardised system-to-system interface by which anonymised data on certificates is transferred to EMSA

**SERVICE DATA**

Data is provided and/or updated by the EU Member States, Iceland and Norway

**BUSINESS UNIT**

1.2. Visits & Inspections, Human Element

**RELATED AGREEMENTS AND LEGAL BASIS**

Directive (EU) 2022/993 of the European Parliament and of the Council of 8 June 2022 on the minimum level of training of seafarers.

**SERVICE KPI**

Scoreboard Activity/Service	STCW Information System	
KPI indicator	Percentage per year availability	96%





## 1.8 E-LEARNING MARITIME KNOWLEDGE

### 1.8.1 MARITIME KNOWLEDGE CENTRE SERVICES - MAKCS

#### SERVICE CLASS

E-learning, maritime knowledge

#### DESCRIPTION

MaKCs (Maritime Knowledge Centre Services) is a cost-effective and efficient platform based on Moodle which allows the publication of up-to-date training material and courses to a large number of users worldwide. It enables tracking and tracing courses' completion and progression and it interfaces with VRESI with the aim of tracking students' completion of training activities performed in the VR environment.

MaKCs is available to users from over 80 countries, including regional agreements (e.g. the Paris MoU on Port State Control, Caribbean MoU, Mediterranean MoU, Indian Ocean MoU), other EU agencies (e.g. EFCA, FRONTEX), and the Commission (e.g. DG MOVE, DG MARE).

More than 60 distance learning programs have been already published since 2011, with almost 5500 users registered on the platform and more than 30 000 individual opened learning instances.

#### SERVICE ACCESS

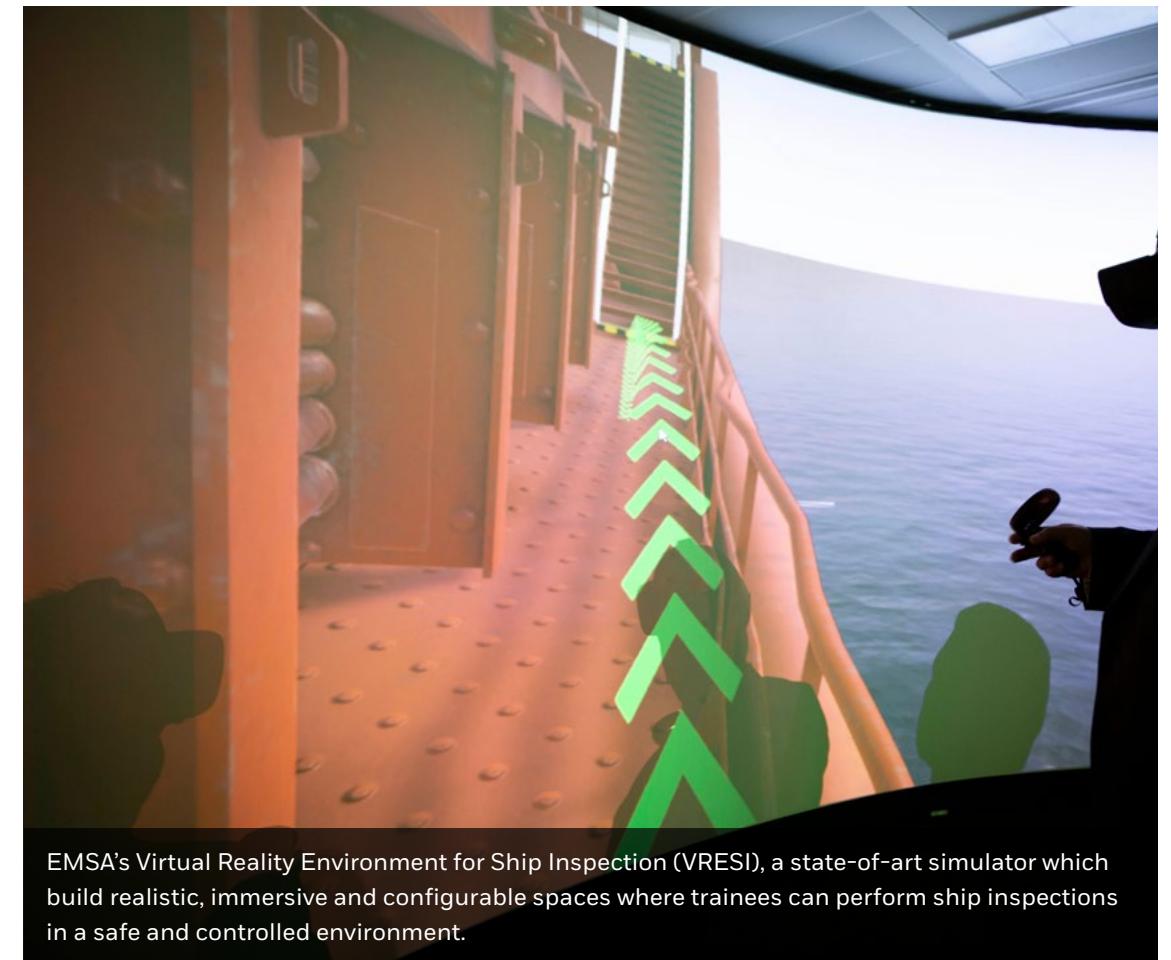
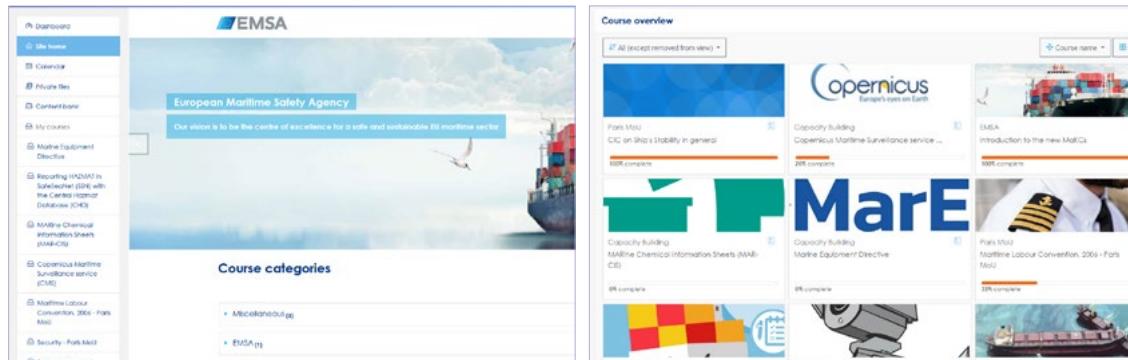


Users have access to the service through the EMSA Portal.

#### SERVICE DATA

None

BUSINESS UNIT	
1.3 Capacity Building	
RELATED AGREEMENTS AND LEGAL BASIS	
N/A	
SERVICE KPI	
Scoreboard Activity/Service	N/A



EMSA's Virtual Reality Environment for Ship Inspection (VRESI), a state-of-art simulator which build realistic, immersive and configurable spaces where trainees can perform ship inspections in a safe and controlled environment.

1.8.2 VIRTUAL REALITY ENVIRONMENT FOR SHIP INSPECTIONS (VRESI)

SERVICE CLASS	E-learning, maritime knowledge
---------------	--------------------------------

DESCRIPTION

The Virtual Reality Environment for Ship Inspections (VRESI) aims at enhancing and modernising training activities. Through VRESI the Agency will foster learning experience offered to its stakeholders and will complement existing as well as new courses with situated and more practical contents. VRESI is a web-based, stable and powerful role-playing, serious game, available via internet and via EMSA local network. It is designed and developed so as to permit the use of standard input (e.g. keyboard, mouse, handheld controller) and output (e.g. computer and wall screens, head-mounted googles) devices. It is used to simulate ship inspections carried out by professionals of organisations in charge of maritime safety, security and the protection of the marine environment by ensuring the same kind of experience, immersion, fluidity, interaction and adherence to reality.

SERVICE ACCESS



Users access the service through the EMSA Portal, either directly or through the MaKCs platform.

SERVICE DATA

None of the existing data sets. VRESI interfaces with MaKCs using a data protocol called SCORM (Shareable Content Object Reference Model).

BUSINESS UNIT

1.3 Capacity Building

RELATED AGREEMENTS AND LEGAL BASIS

N/A

SERVICE KPI

Scoreboard Activity/Service	Not yet defined
-----------------------------	-----------------

1.8.3 RULECHECK

SERVICE CLASS	E-learning, maritime knowledge
---------------	--------------------------------

DESCRIPTION

RuleCheck provides a digitised library of maritime legislation. RuleCheck has been designed and developed to give Port State Control Officers (PSCOs) in the Paris MOU region a complete list of all the rules and procedures which apply to ships to be inspected, based on the ship type and age. The system ensures that the users are able to properly apply the relevant rules to ships. As from early 2015 onwards the system is also available to users in the Mediterranean MoU and Black Sea MoU, and to any other governmental authority that may need access to the available information.

The system allows easy access to Convention references supporting deficiencies found during inspections. Containing all relevant documentation from the International Maritime Organisation (IMO), the International Labour Organisation (ILO), the European Union (EU), and the Paris, Mediterranean and Black Sea Memoranda on Port State Control, it provides PSCOs with documentation applicable to any type of ship.

The availability of these documents and the ease of accessibility of their content leads to improvement in the effectiveness and consistency of inspections carried out in all countries where the system is used. The system is revised bi-annually as new content becomes available.

SERVICE ACCESS



EMSA portal for restricted area.

SERVICE DATA

N/A

BUSINESS UNIT

1.3 Capacity Building

RELATED AGREEMENTS AND LEGAL BASIS

N/A

SERVICE KPI

Scoreboard Activity/Service	System Operational	
KPI indicator	Percentage per year availability	95%
KPI indicator	Days maximum continuous downtime	3 days



## 1.9 MARITIME SUPPORT SERVICES

### 1.9.1 MARITIME SUPPORT SERVICES

#### SERVICE CLASS

Note: MSS is a horizontal sector that may cover several services, mainly EO, IMS, Vessel positioning and pollution response (among those listed) and other services, e.g., monitoring data flows, monitoring and issuance of digital certificates or reporting on specific ships or traffic.

#### DESCRIPTION

24/7 operational and technical helpdesk to serve the users of the different maritime applications, and single point of contact for responding to request for assistance in case of maritime emergencies.

#### SERVICE ACCESS

Over phone/email.

#### SERVICE DATA

Any, including external sources.

#### BUSINESS UNIT

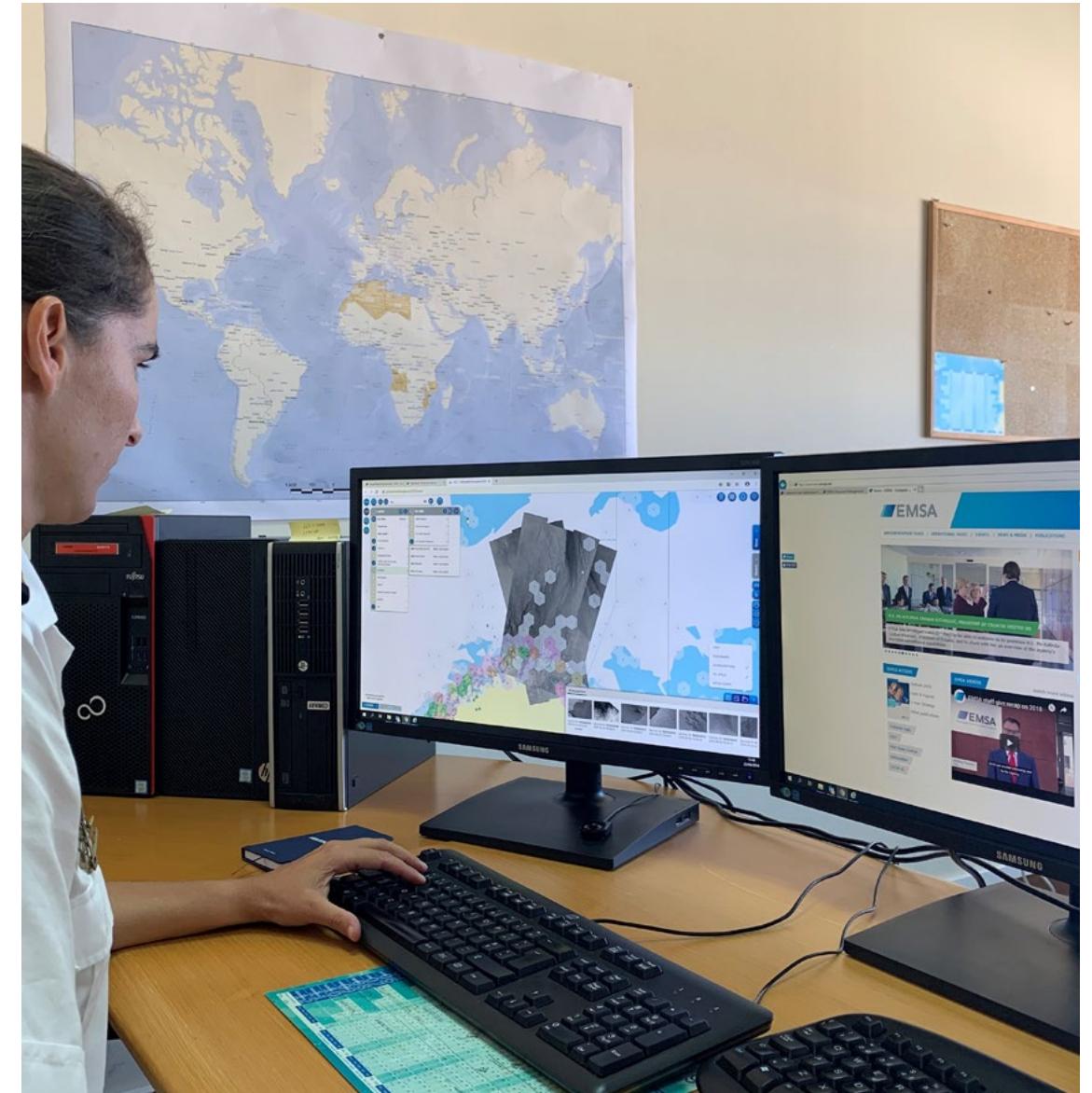
3.2 Digital Infrastructure

RELATED AGREEMENTS AND LEGAL BASIS

N/A

SERVICE KPI

Scoreboard Activity/Service	Helpdesk	
KPI indicator	average time in hours for feedback or resolution of issues relating to emergencies, incidents in maritime applications or urgent helpdesk requests	<2 hours
KPI indicator	average time in hours for feedback or resolution of issues relating to non-urgent helpdesk requests or scheduled interventions	<8 hours
Scoreboard Activity/Service	SSN / LRIT Data Quality Reports	
KPI indicator	reporting on the SafeSeaNet implementation and data quality (overall and per Member State)	20 reports minimum



## APPENDIX A

DATA REFERENCES	
<b>1</b>	<b>SSN Products</b>
1.1 Dataset	Port call data
1.2 Dataset	HAZMAT
1.3 Dataset	Waste
1.4 Dataset	Security
1.5 Dataset	Bunkers
1.6 Dataset	Persons on board passenger ships
1.7 Dataset	Persons on board passenger ships
1.8 Dataset	Incidents / accidents
1.9 Dataset	Exemptions
<b>2</b>	<b>Vessel Positions</b>
2.1 Dataset	MRS
2.2 Dataset	T-AIS
2.3 Dataset	T-AIS from SAFEMED
2.4 Dataset	T-AIS from BCSEA
2.5 Dataset	T-AIS from external providers
2.6 Dataset	LRIT
2.7 Dataset	SAT-AIS
2.8 Dataset	VMS
2.9 Dataset	Ship AIS

DATA REFERENCES - CONT.	
<b>3</b>	<b>EMSA Central Reference Databases</b>
3.1 Dataset	Central Geographical Database (CGD)
3.2 Dataset	Central Location Database (CLD)
3.3 Dataset	Central Organisation Database (COD)
3.4 Dataset	Central Ship Database (CSD)
3.5 Dataset	Central Hazmat Database (CHD)
3.6 Dataset	MAR-CIS
<b>4</b>	<b>Fishery Information</b>
4.1 Dataset	EU Fleet Register
4.2 Dataset	Maritime boundaries and fishing areas repository
4.3 Dataset	Fisheries inspection and surveillance information
<b>5</b>	<b>Ship Inspection Support and Port State Control</b>
5.1 Dataset	THETIS database
5.2 Dataset	THETIS EU Sulphur
5.3 Dataset	THETIS EU Port Facilities
5.4 Dataset	THETIS EU Maritime Security
5.5 Dataset	THETIS EU Ship Recycling
5.6 Dataset	THETIS EU RoRo Ferry
5.7 Dataset	THETIS MRV - Monitoring, reporting and verification
5.8 Dataset	THETIS Mediterranean MoU

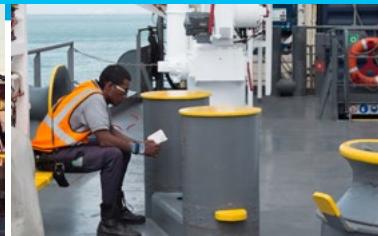
DATA REFERENCES - CONT.	
5.9 Dataset	THETIS eCertificates
5.10 Dataset	THETIS Insurance Information
5.11 Dataset	THETIS Liability of Carriers of Passengers
5.12 Dataset	RuleCheck
<b>6</b>	<b>Earth Observation Products</b>
6.1	CleanSeaNet oil spill and vessel detection services products
6.3	Copernicus Maritime Surveillance Service products
<b>7</b>	<b>Meteorological and Oceanographic Data</b>
7.1	Copernicus Marine Environment Monitoring Service
7.2	European Marine Observation and Data Network
7.3	Copernicus Atmospheric Monitoring Service
7.4	European Organisation for the Exploitation of Meteorological Satellites
7.5	Frontex Meteorological data
7.6	Frontex Oceanographic data
<b>8</b>	<b>Assets</b>
8.1	Details
8.2	Deployment
8.3	Position, speed, course, etc.

DATA REFERENCES - CONT.	
<b>9</b>	<b>Data collected by aerial assets</b>
9.1	Video and images (optical and IR)
9.2	Radar images
9.3	Radar derived vessel tracks
9.4	AIS data
9.5	Distress signals
9.6	Distress signals
<b>10</b>	<b>Open source intelligence</b>
10.1	Frontex - open source intelligence
10.2	EMSA - EWS accident/incident/news reports



© **European Maritime Safety Agency 2022**

Photo credits: EMSA; ESAATG medialab; Epicstockmedia/shutterstock.com; dan\_prat/iStockphoto.com; Yuri\_Arcurs/iStockphoto.com; M\_CarlosAndreSantos /iStockphoto.com; Nick1803/iStockphoto.com; wissanu01/iStockphoto.com; J-NM-R194-016; J-NM-R194-052; andrey polivanov/shutterstock.com; EMSA; ©EMSA, 2021, contains modified RADARSAT-2 data data. All rights reserved. Certain parts are licenced under conditions to EMSA; Marinha Portuguesa; Europol; EUNAVFOR; Aleksandar Mijatovic/shutterstock.com; lero/shutterstock.com; Nightman1965 /shutterstock.com; Anton Balazh/shutterstock.com; artjazz/shutterstock.com; nattapon supanawan/shutterstock.com; Avigator Fortuner/shutterstock.com; KitiphongPho30/shutterstock.com; Igor Kardasov/shutterstock.com; Wojciech Wrzesien/shutterstock.com; lam\_Anupong/shutterstock.com; Alvaro Ardisana/shutterstock.com; Ververidis Vasilis/shutterstock.com; triple v/shutterstock.com; Levgen Postovyk/shutterstock.com; everst/shutterstock.com; Sven Hansche/shutterstock.com; Tawansak/shutterstock.com; HR AI; EpicStockMedia/shutterstock.com; IndustryAndTravel/shutterstock.com; NicoElNino/shutterstock.com; levgeniya Ocheretna/shutterstock.com; Alexander Schedrov/shutterstock.com; S-F/shutterstock.com; Aytug askin/shutterstock.com; G-Valeriy/shutterstock.com; Rob Wilsony/shutterstock.com; Vitalez/shutterstock.com; Coredesign/shutterstock.com.



## 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**

**European Maritime Safety Agency**

Praça Europa 4

1249-206 Lisboa Portugal

Tel +351 21 1209 200 / Fax +351 21 1209 210

[emsa.europa.eu](http://emsa.europa.eu) / [Twitter EMSA\\_Lisbon](https://twitter.com/EMSA_Lisbon)