

Training on IMS, SEG and ABMs

Introduction to IMS and SEG

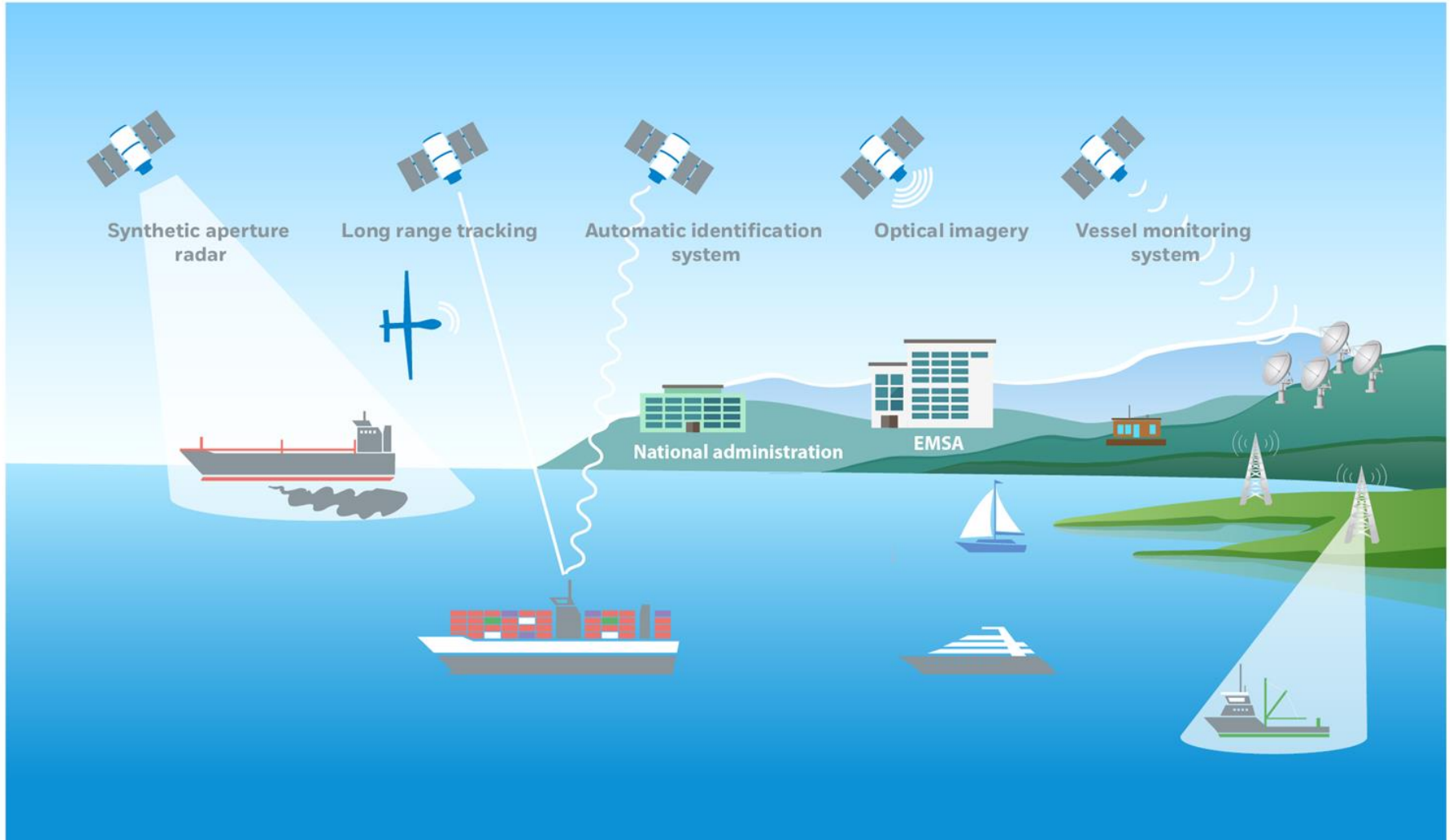
Via visio conference / 19 November 2020

Background and legal basis(1)

EMSA services – SafeSeaNet (SSN) and Integrated Maritime Services (IMS)

- **Directive 2002/59/EC** sets up the vessel traffic monitoring and information exchange system
- **Scope:** To enhance maritime safety, port and maritime security, environmental protection and pollution preparedness. Permits the exchange and sharing of additional information facilitating efficient maritime traffic and transport.
- Links all national SafeSeaNet systems to the central **SafeSeaNet + Integrates additional data sets (Annex III)**

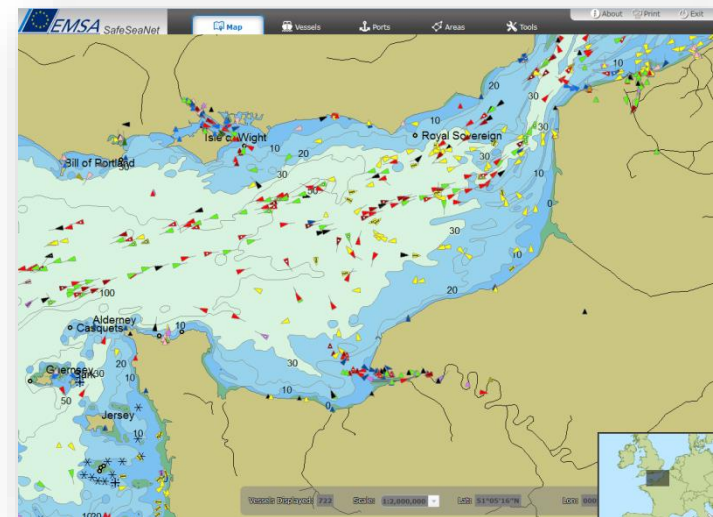
Maritime picture sources



SafeSeaNet is a European Platform for Maritime Data Exchange developed in accordance with Directive 2002/59/EC – it is a network of National systems and the central node.

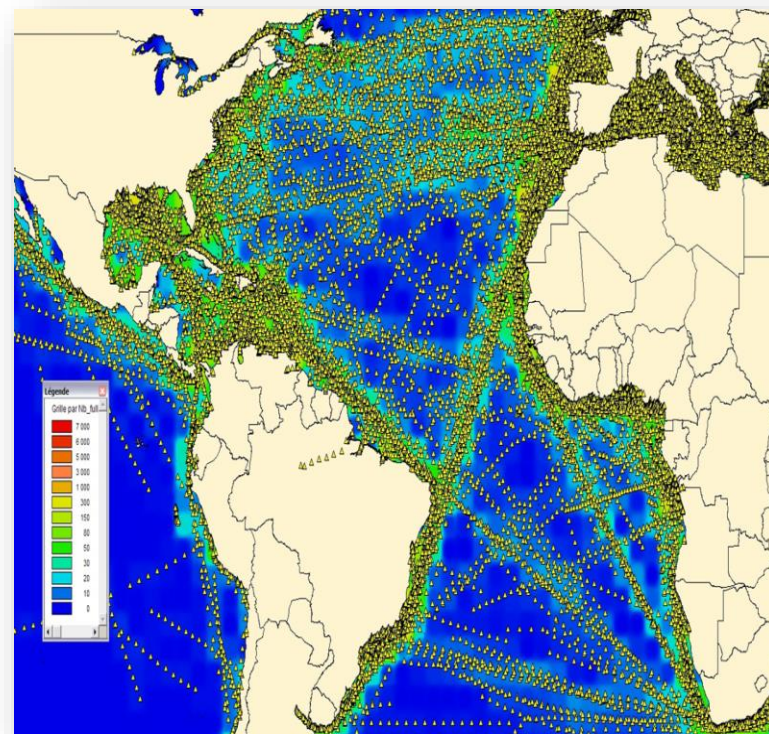
The exchange of vessel, voyage and other information via SSN supports users at EU and MS.

- Over 20,000 ships tracked in MSs area of responsibility every day
- > 100 million AIS positions recorded per month
- 160,000 messages received per month



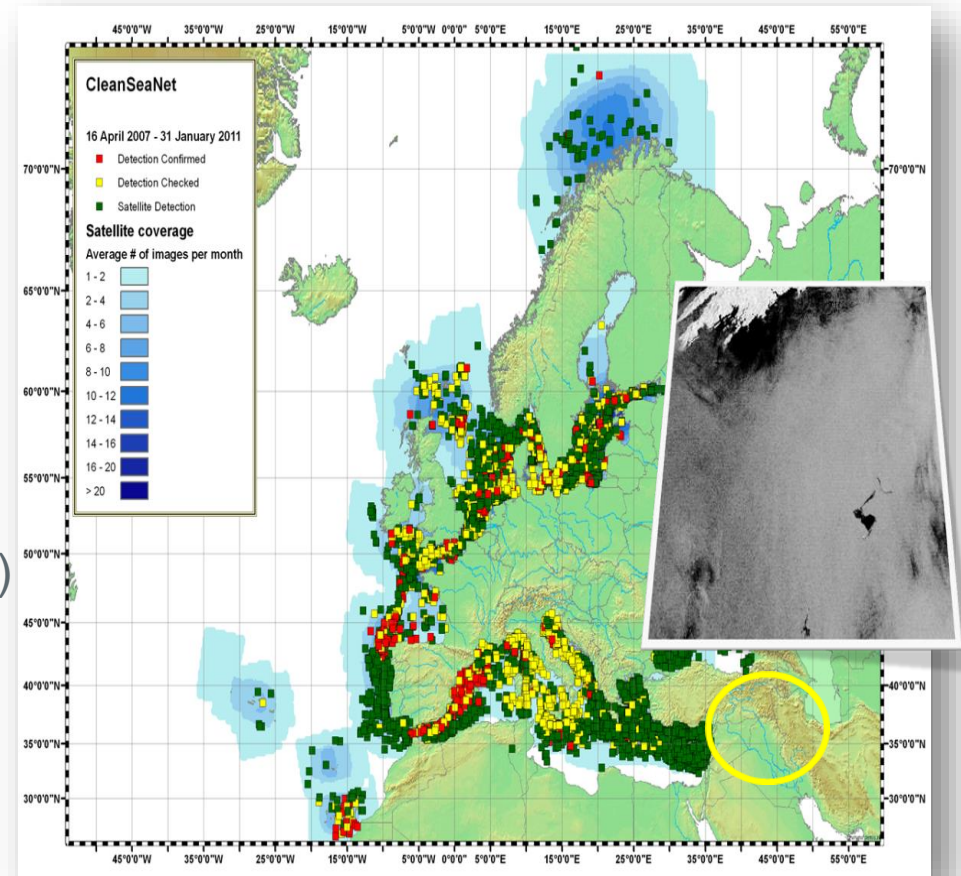
IMO SOLAS amendment & EU Council LRIT Res. 2007

- Designed and set-up 2008 – 2009
- Based on communication satellites (Inmarsat, Iridium).
- Monitoring EU ships worldwide
- All ships within 1,000 Nm
- Long range maritime picture
- Approx. 500+ users (Flag State, Coastal State, SAR)
- Governance body = LRIT NCA's Group (MS+COM).



Legal basis: Directive 2005/35/EC

- Designed and set-up 2005-07
- Use satellite radar detection
- (> 6000 services*/year)
- Objective: EU oil spill and ship target detection
- Approx. 500+ users (Pollution control)
- Governance = CSN Users Group (MS+COM)

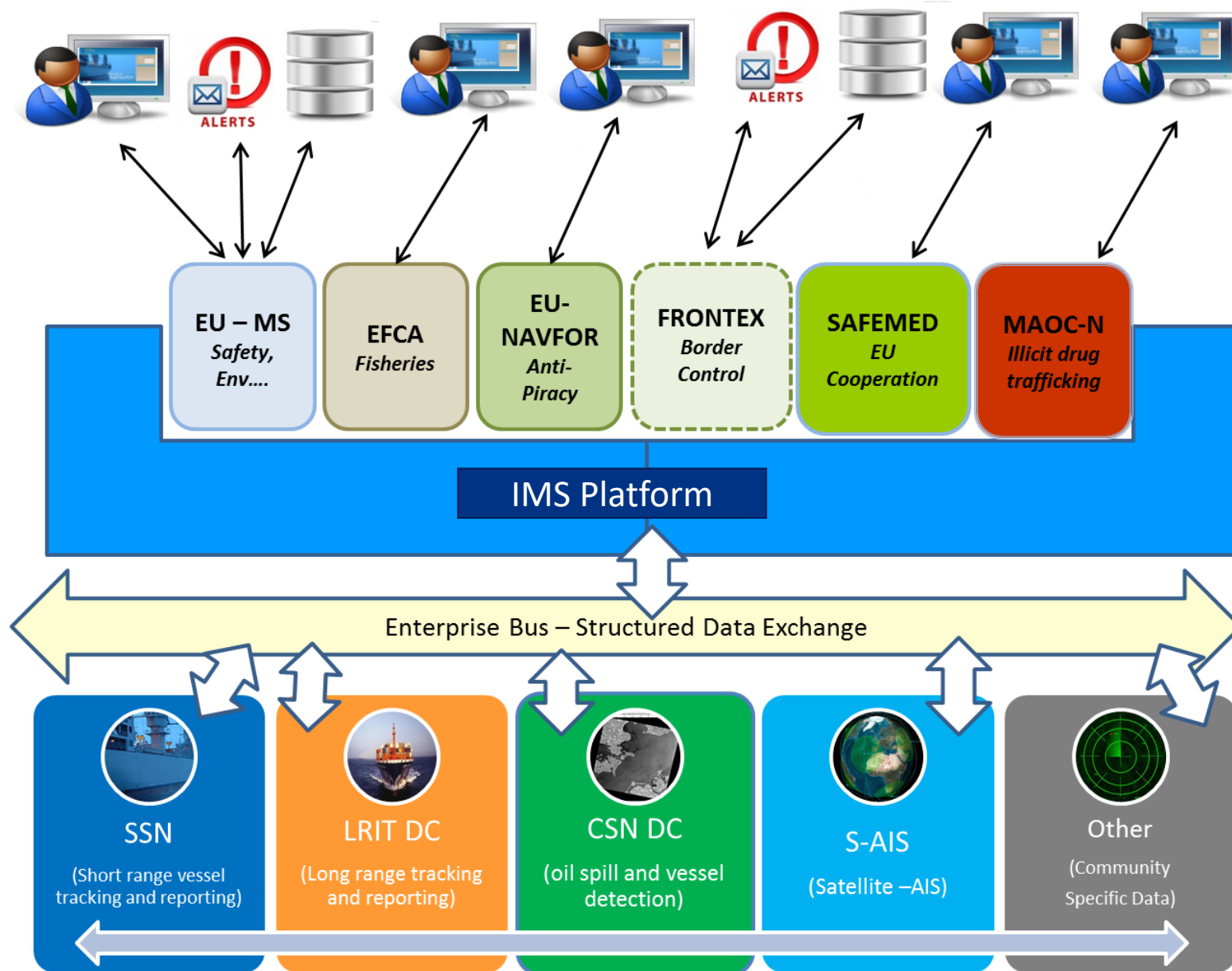


* Services include satellite image and value-added products (e.g. spill detection, vessel detection and SAR met-ocean information)

EU Programme aimed at developing European information services based on satellite Earth Observation and in-situ data



- Maritime Surveillance using satellite imagery and derived data products
- Restricted access. Delivered directly and securely to user
- Copernicus images (SAR and Optical) and products available via IMS



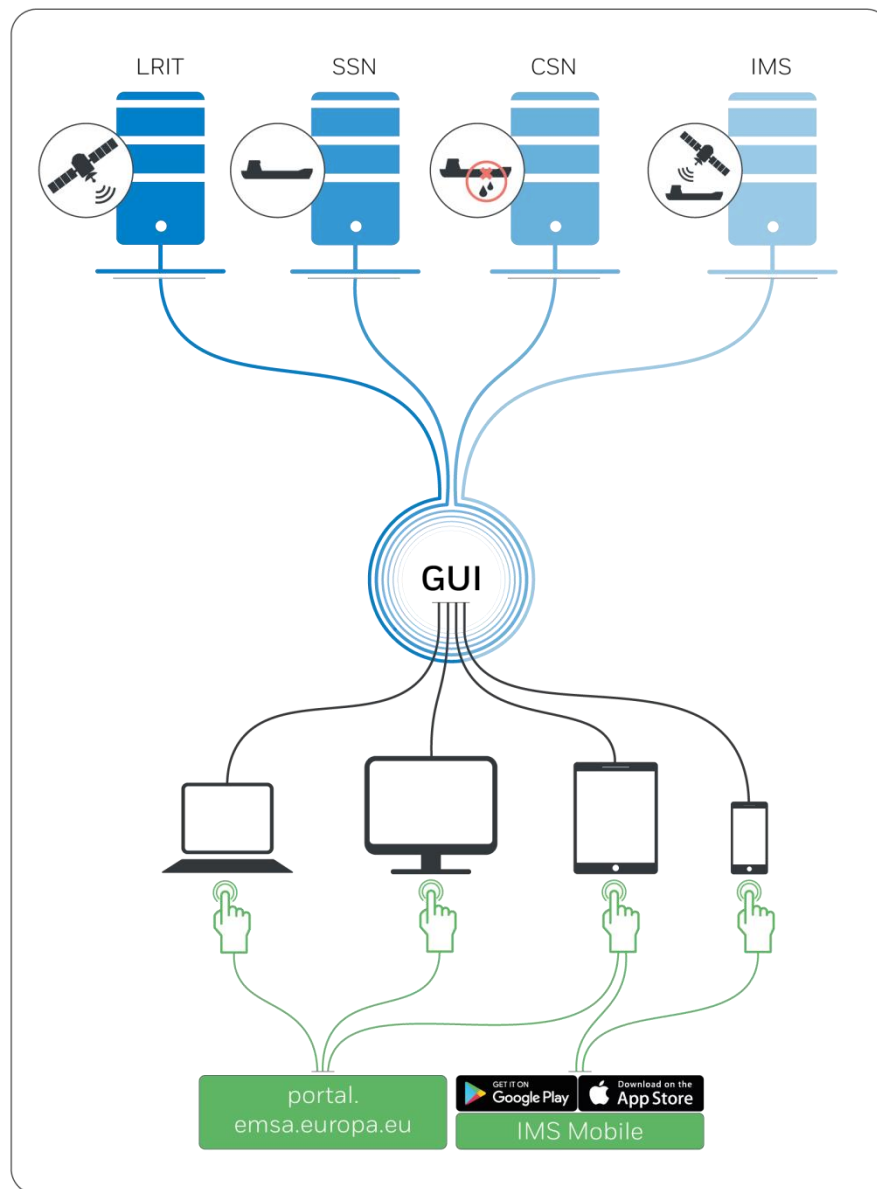
What is the difference between the IMS and SEG?

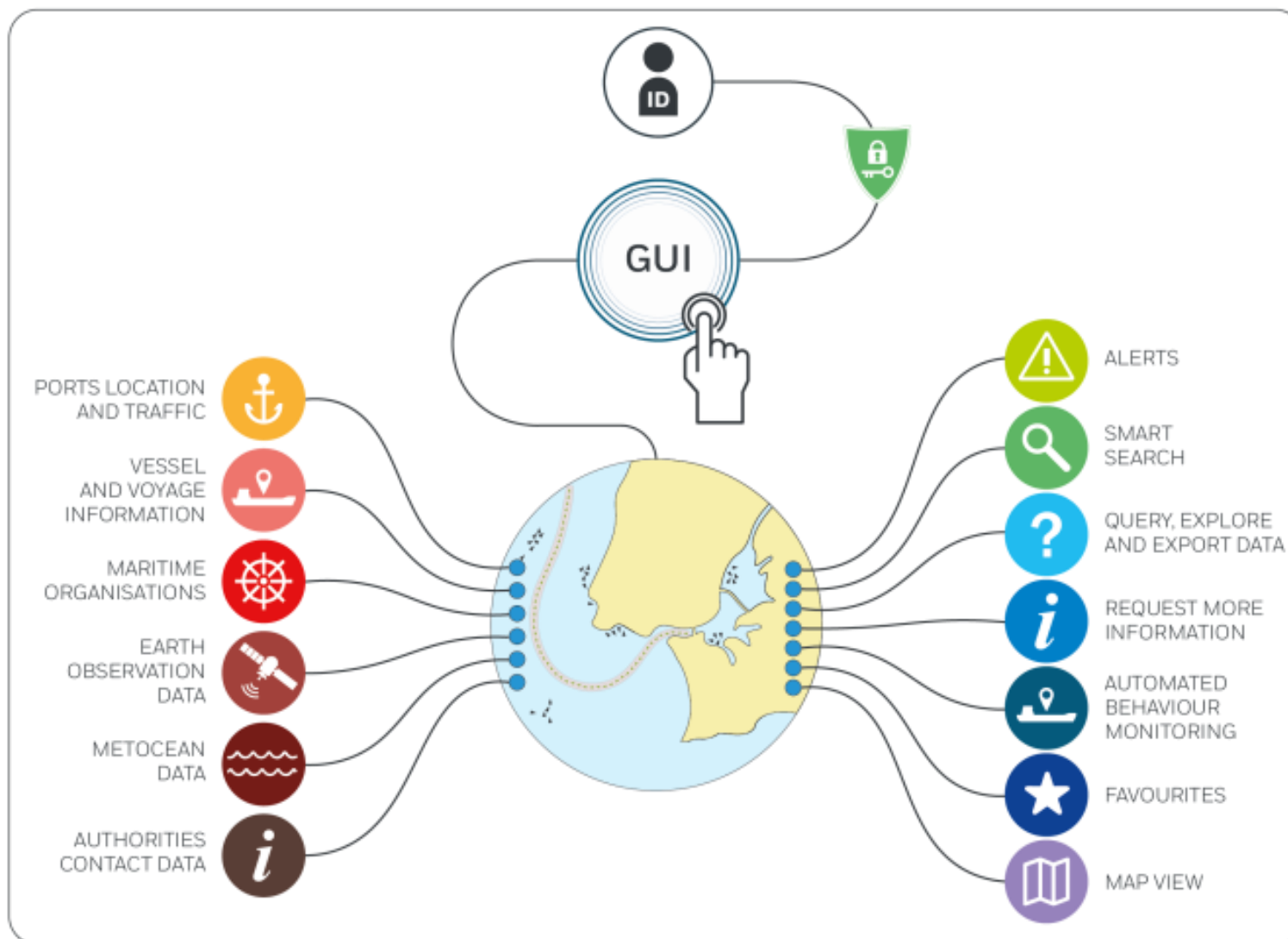
- **IMS** is a set of data + back-end technical platforms + projects, allowing integration of various information sets

What does SEG stand for?

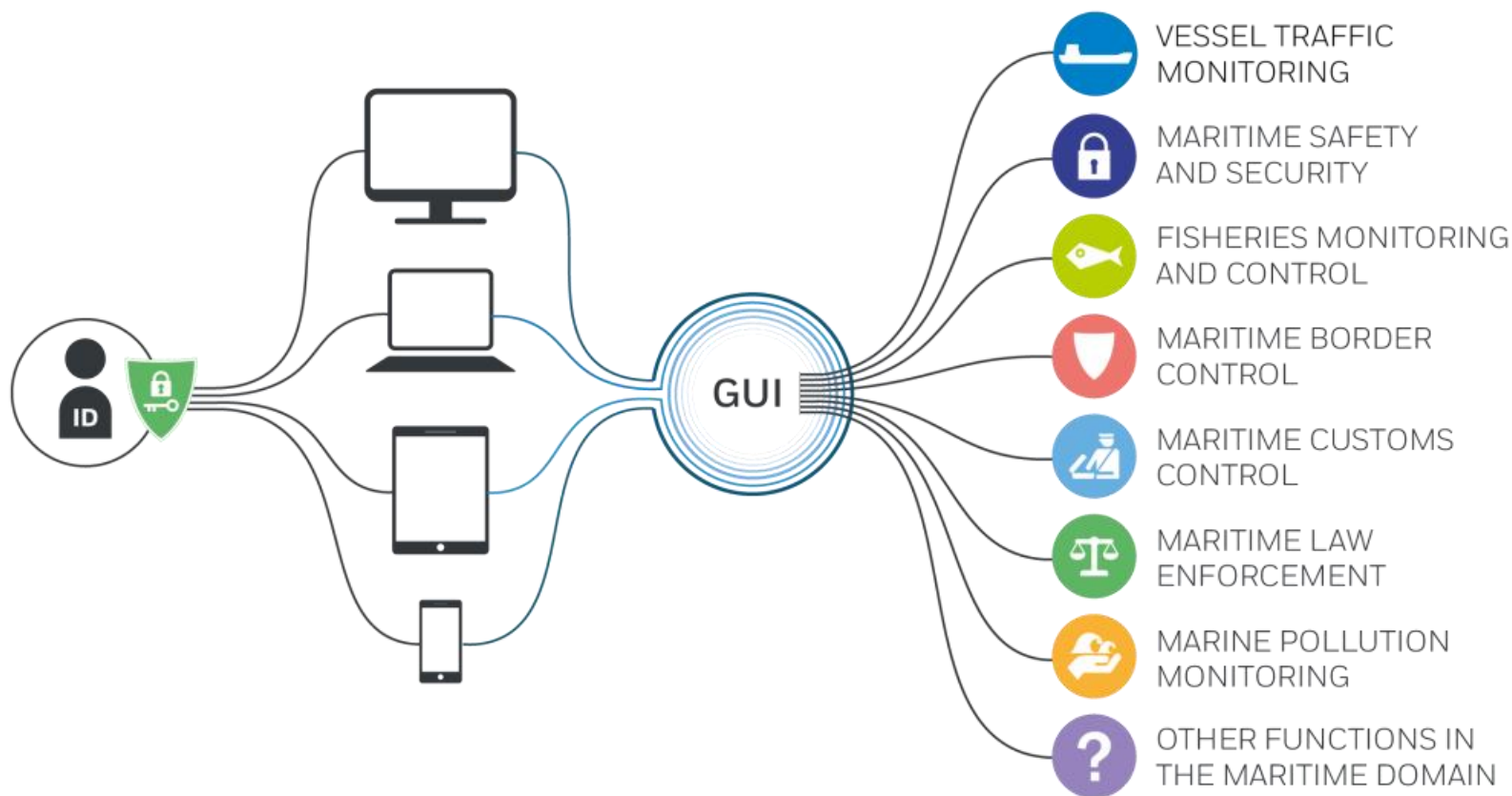
- SafeSeaNet Ecosystem GUI (SEG) is a **common graphical user interface** to serve needs of different user domains.
- New single Graphical User Interface that will replace
 - Integrated Maritime Services Web User Portal (WUP)
 - SafeSeaNet Graphical Interface (GI)
 - CleanSeaNet GIS Viewer

New Common Graphical User Interface





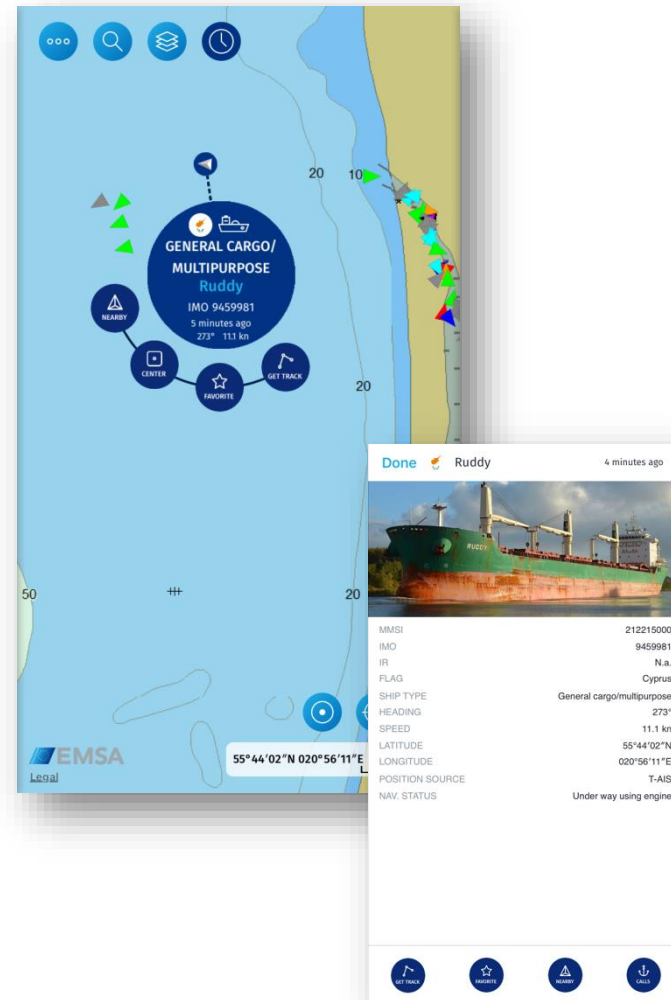
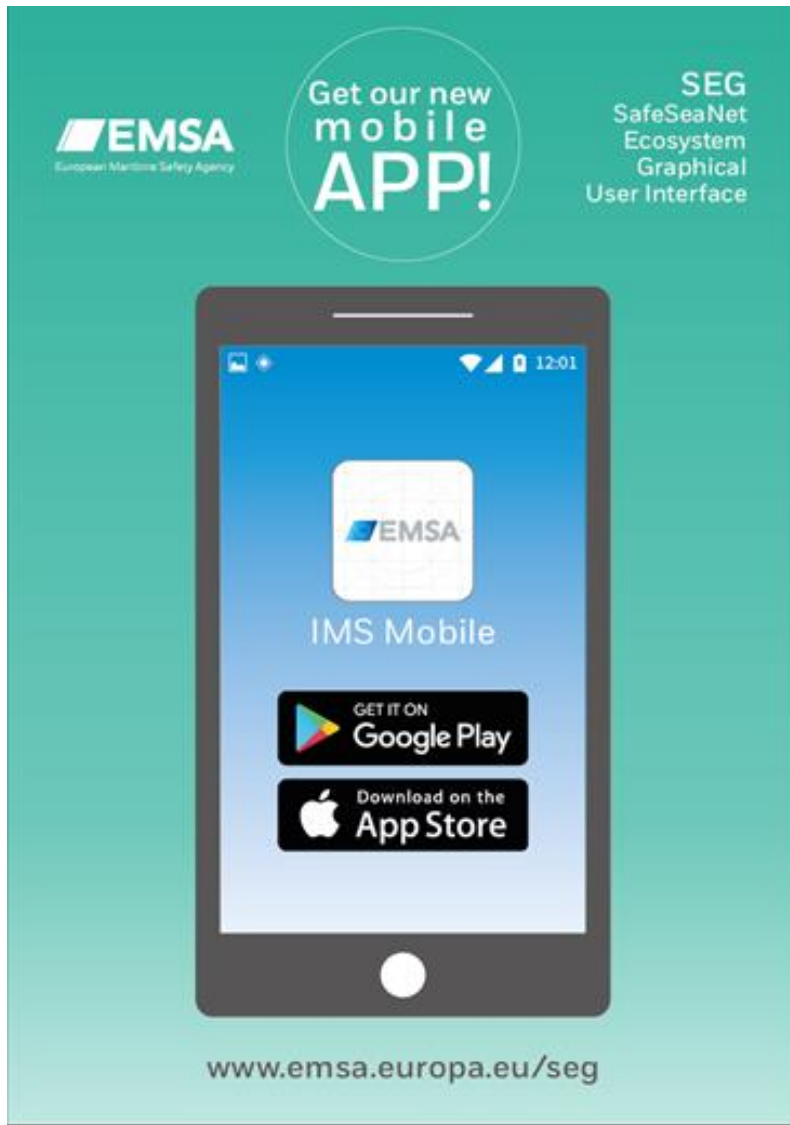
Who may use it? Multiple user domains



Graphical User Interface and the Mobile App

- Simple map centred layout
- Functions are easy to find and to use
- Enabled for mobile and touch screen devices
(No right mouse click available)

IMS App – simplified GUI



Access to the SEG

- Access to the SEG is provided via the EMSA Maritime Application Portal
- <https://portal.emsa.europa.eu>
- For existing users the username/password has NOT changed



Access rights

- Maritime information is made available in accordance with the individual users' data access rights and permissions settings.
- All existing access data rights policies are maintained.
- Positions data shown are coming from EU Members States who accepted to share their data with other EU MSs and from commercial provider (SAT-AIS).

Position sources:

- AIS data (T-AIS + S-AIS)
- LRIT (MS agreeing to share their own LRIT flag ships: DK, FI, FR, DE, GR, IS, IT, LV, LT, NO RO, SI and NL)
- VMS (available only to IMS users for their own flag + Italian flag)
- VDS (From CSN and Copernicus)
- MRS

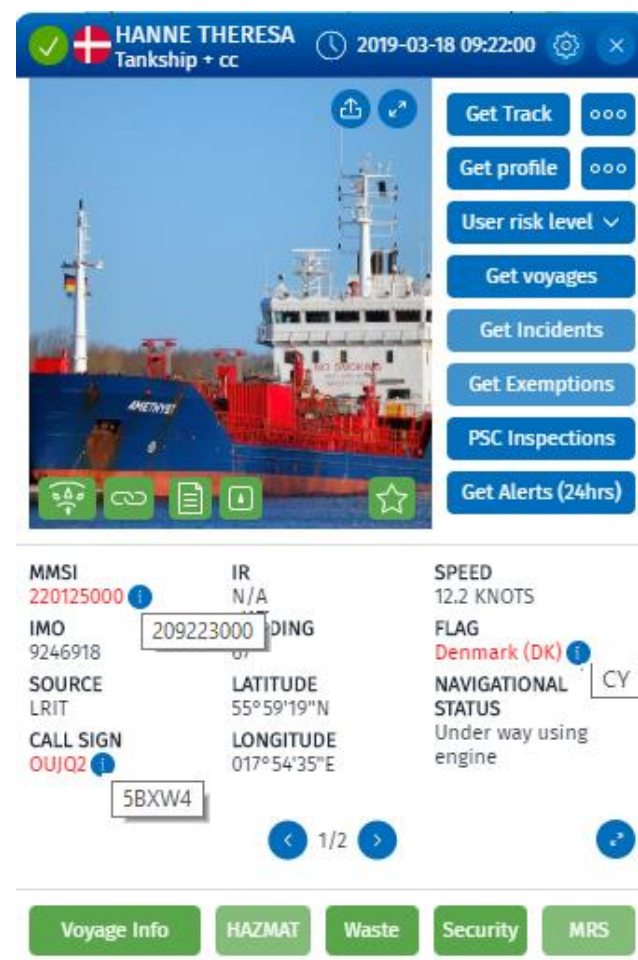
* SEG always displays latest available position within last 24 hours.

Vessel identifiers:

- IMO (OVR)
- MMSI (OVR)
- Call Sign (OVR)
- Ship Name (OVR)
- Flag (OVR)
- Type description (OVR)
- IR (OVR)
- Length (OVR)
- Breadth (OVR)

Validation against CSD for:

- IMO
- MMSI
- Call Sign
- Flag



The screenshot displays the EMSA vessel information interface for the ship HANNE THERESA, a Tankship from Denmark. The interface includes a header with the ship's name, flag, and a timestamp of 2019-03-18 09:22:00. Below the header is a large image of the ship. To the right of the image are several buttons: Get Track, Get profile, User risk level (dropdown), Get voyages, Get Incidents, Get Exemptions, PSC Inspections, and Get Alerts (24hrs). Below the image is a table of vessel details:

Field	Value
MMSI	220125000
IR	N/A
IMO	9246918
CALL SIGN	OJQ2
SOURCE	LRIT
LATITUDE	55° 59' 19" N
LONGITUDE	017° 54' 35" E
SPEED	12.2 KNOTS
FLAG	Denmark (DK)
NAVIGATIONAL STATUS	Under way using engine

At the bottom of the interface are several tabs: Voyage Info, HAZMAT, Waste, Security, and MRS.

➤ Ship notifications:

- MRS

➤ Port Plus notifications:

- Pre-arrival (72h - 24 hours), arrival and departure
- Hazmat information (dangerous and polluting goods on board)
- Notification of waste and cargo residues (Article 6 of Directive 2000/59/EC)
- Notification of security information (Article 6 of Regulation (EC) No 725/2004)
- Bunkers on board

➤ Incident reports:

- Information submitted by MSs about accidents and incidents occurring at sea (e.g. SITREP, POLREP etc...)

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 (SSN and NSW).

The CLD contains:

- LOCODEs listed in UN/LOCODE list,
- SSN Specific locations
- Port facilities information stemming from the IMO Maritime Security module of the Global Integrated Shipping Information System (GISIS)

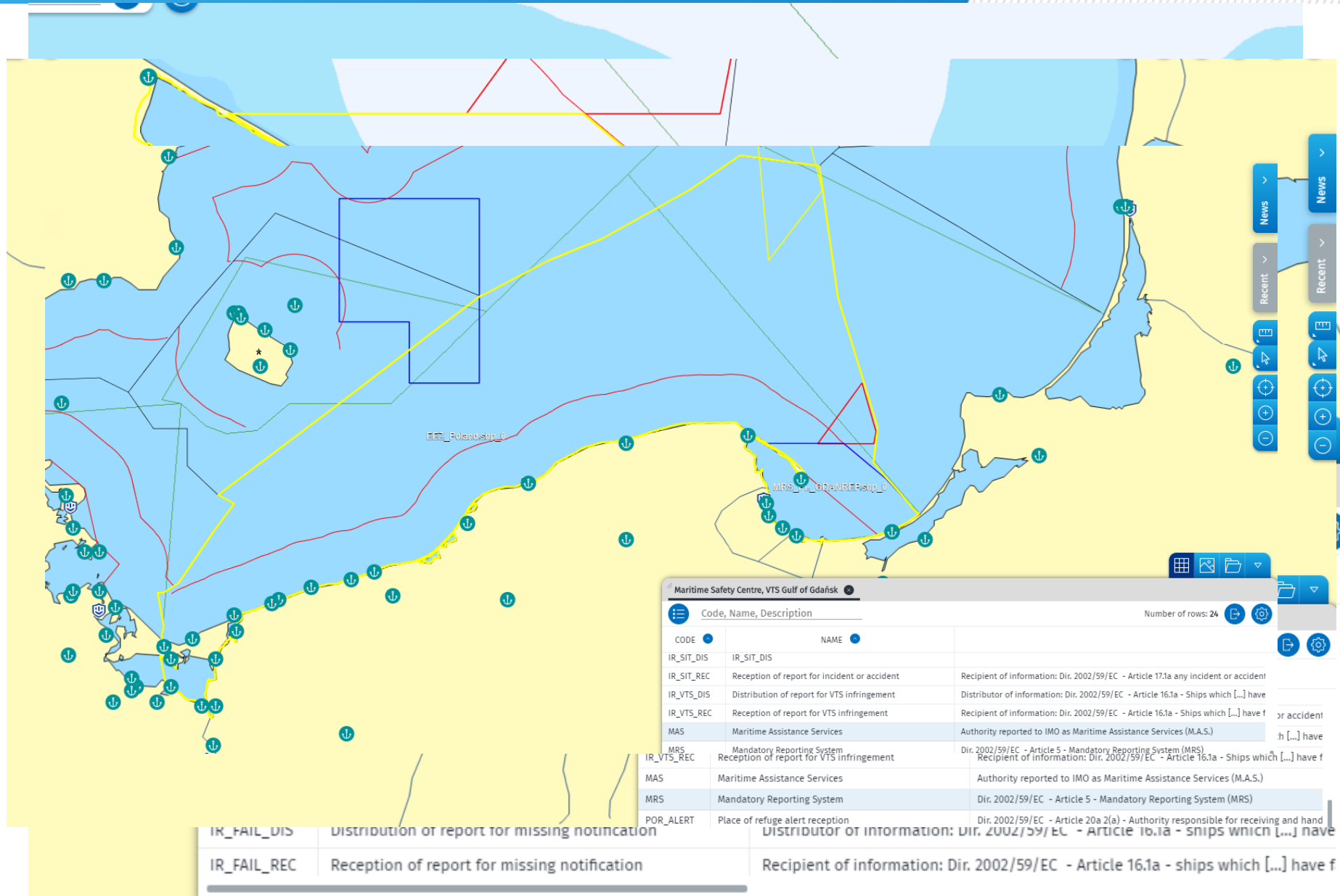
*** SEG only displays LOCODEs corresponding to ports and off-shore installations.**

The Shore-based Traffic Monitoring and Information Database (STMID) gathers the information on the designated authorities in accordance with Article 22 of the Directive 2002/59/EC as amended.

SEG is connected to this database and allows the users to:

- Display organisations on a map;
- Search for organisations based on name;
- Filter organisations based on duties (e.g. SSN NCA, MAS, VTS, etc.)
- Find contact details (address, phone, e-mail, etc.) of different organisations.
- Shows areas of responsibility associated to a duty.

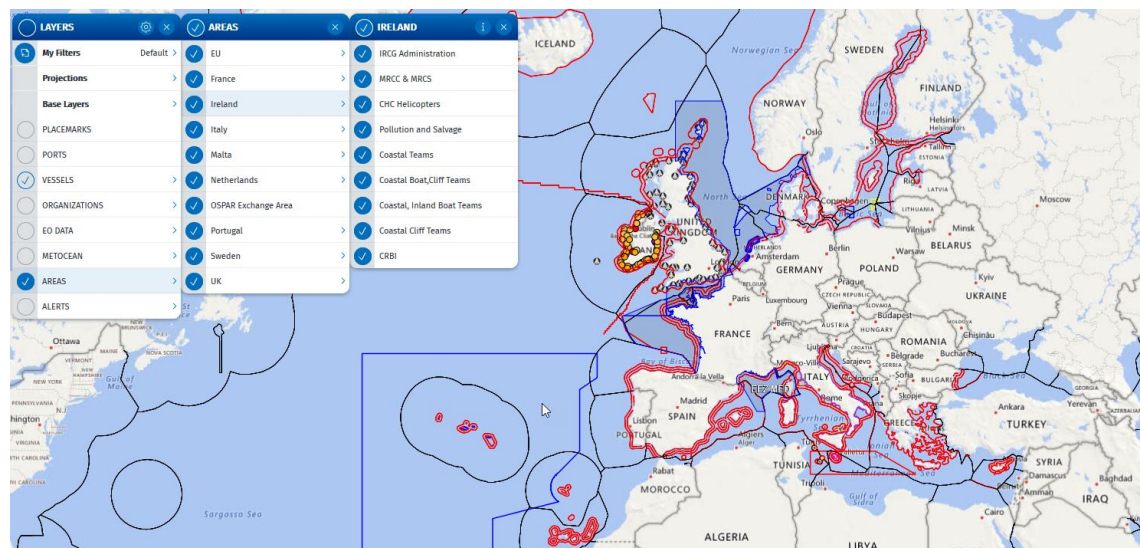
Sources of data – Organisations



- **CleanSeaNet and**
- **Copernicus Maritime Surveillance (available to IMS users)**
 - SAR images and value-added products:
 - Oil spills
 - VDS (correlated and uncorrelated positions)
 - Optical images and value-added products:
 - VDS (correlated and uncorrelated positions)
 - Activity detection

➤ Member State may request EMSA to insert in SEG system different areas of interest such as:

- EEZ
- Fisheries Lines
- Fishing Zones
- Secure areas
- Territorial waters



* These areas are visible to all SEG users.

Subject to approval (LRIT NCA or
National fisheries authorities)

**Additional LRIT and VMS
information**

Subject to SSN NCA approval

**SSN Details
(Hazmat, Waste, Security,
MRS and Incidents)**

Ship LRIT information*

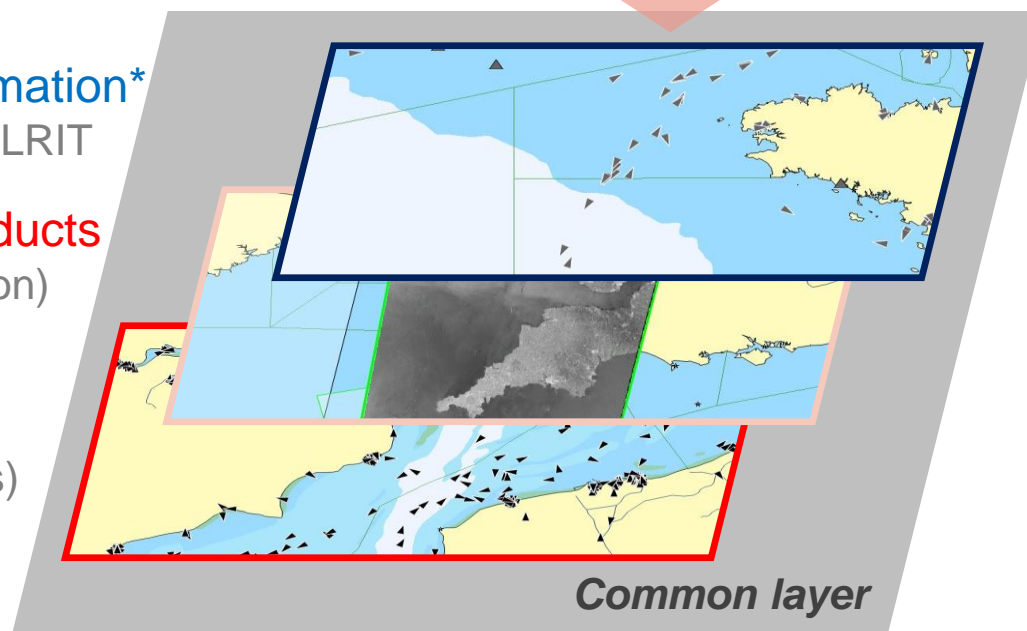
(only MS agreeing to share own LRIT
flag ships)

Satellite products

(images, oil spill and ship detection)

**Ship AIS positions + voyage
information**

(T-AIS + S-AIS, SSN notifications)



* LRIT and VMS data is provided for E-SARSURPIC queries for users with SAR profile



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