SafeSeaNet

An information system to improve maritime safety in Europe

This information leaflet is intended to provide SafeSeaNet users with a concise overview of the system and its main interfaces.

1. Background:

Every year, there are millions of commercial ship movements in and around EU waters and hundreds of these result in accidents. Under these conditions, information on cargoes, ship safety records and port destinations is of vital importance to support safety at sea, protection of the maritime environment and economic efficiency. In the past, this information was handled by many different interests, such as port authorities, search and rescue organisations (eg MRCCs) and those responsible for vessel traffic services (VTS). The exchange of information was relatively difficult because they used different ways to collect, store and transfer data and many had incompatible IT systems.

2. SafeSeaNet Overview

To overcome these information exchange problems, and to fulfil the obligation given in **Directive 2002/59/EC** (which establishes a Community vessel traffic monitoring and information system), a pan-European system named **SafeSeaNet** (SSN) was developed.

SafeSeaNet became the European electronic reporting and information system for vessel traffic, with the aim of: enhancing the safety and efficiency of maritime traffic; improving the response of authorities to incidents, accidents or potentially dangerous situations at sea (including search and rescue operations) and; contributing to improved prevention and detection of pollution by ships.

SafeSeaNet starting page

In August 2004, the operational phase of the SSN system began and the **European Maritime Safety Agency** (**EMSA**) was given the responsibility for developing and operating the system.

SafeSeaNet aims at:

Safer seas and better protection of seafarers through:

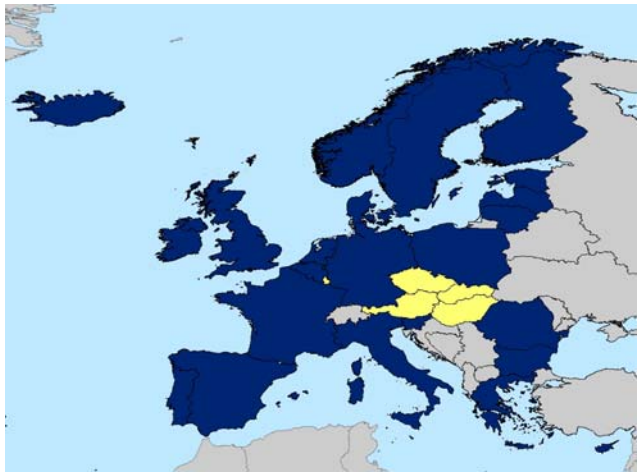
- *early identification of high-risk vessels.*
- *earlier precautionary actions and risk mitigation.*
- *improved emergency response to incidents or pollution.*

More efficient operations by:

- *standardising access to data.*
- *helping users to respect their legal obligations.*
- *increasing the efficiency of port logistics (eg providing more accurate estimated times of arrival, details of waste handling, etc.)*

High quality EU level monitoring by providing:

- *accurate, up-to-date information on the location of ships and their cargoes.*
- *reliable statistics for EU and Member State bodies (including Iceland and Norway).*



SafeSeaNet participating countries
(● Coastal ○ Non-Coastal)

All EU/EEA coastal countries participate in SafeSeaNet and act as data providers and requesters. The non-coastal countries (ie countries without a coastline or sea ports) only have obligations relating to ships flying their flag.

The SSN application not only allows users to ***provide*** maritime data and to ***request*** information when needed, but also contains the so called **'Incident Report Distribution'** function. This shows whether a ship or its cargo might represent a potential risk to Member States along its route by providing details of previous accidents/incidents or of hazardous cargo being carried.

3. SSN Users

SSN is a one-stop-shop solution for maritime data exchange. Data are collected and indexed on a single server, thus simplifying the way that SSN users (port authorities, VTSs, etc.) obtain the information. Ship agents, masters and operators are the main data providers, sending data to the Member States' national SSN application. Ports and other Member States' authorities (VTSs, MRCCs, etc) act as data requesters.

The access granted to SSN users depends on the **National Competent Authority** (**NCA**) which manages the SSN access rights at national level.

4. SSN Messages

SSN messages take several different forms:

Port Notification: This is used to notify SSN that a specific vessel is bound for a particular port. The Estimated Time of Arrival (ETA) and the number of persons on board are included in the message.

Ship Notification: This is used to provide SSN with details of a ship's voyage and cargo information. Notifications are based on Automatic Identification System (AIS) messages sent automatically by the ships, and Mandatory Reporting System (MRS) messages which are sent by masters to coastal stations.

Hazmat Notification: This is used to notify SSN that a given vessel carries dangerous or polluting goods on board, and that the data provider has detailed information on these goods.

Incident Report: This is used to notify SSN that the data provider holds information on a specific incident related to:

- ship safety and seaworthiness - safety related incident report (using SITREP form)
- the environment:
  - Pollution incident report (using POLREP form).
  - Waste incident report.
  - Lost and found containers incident reports.
- other incident reports:
  - Banned ships.
  - Ships not having reported according to IMO or European Directive 2002/59 rules.

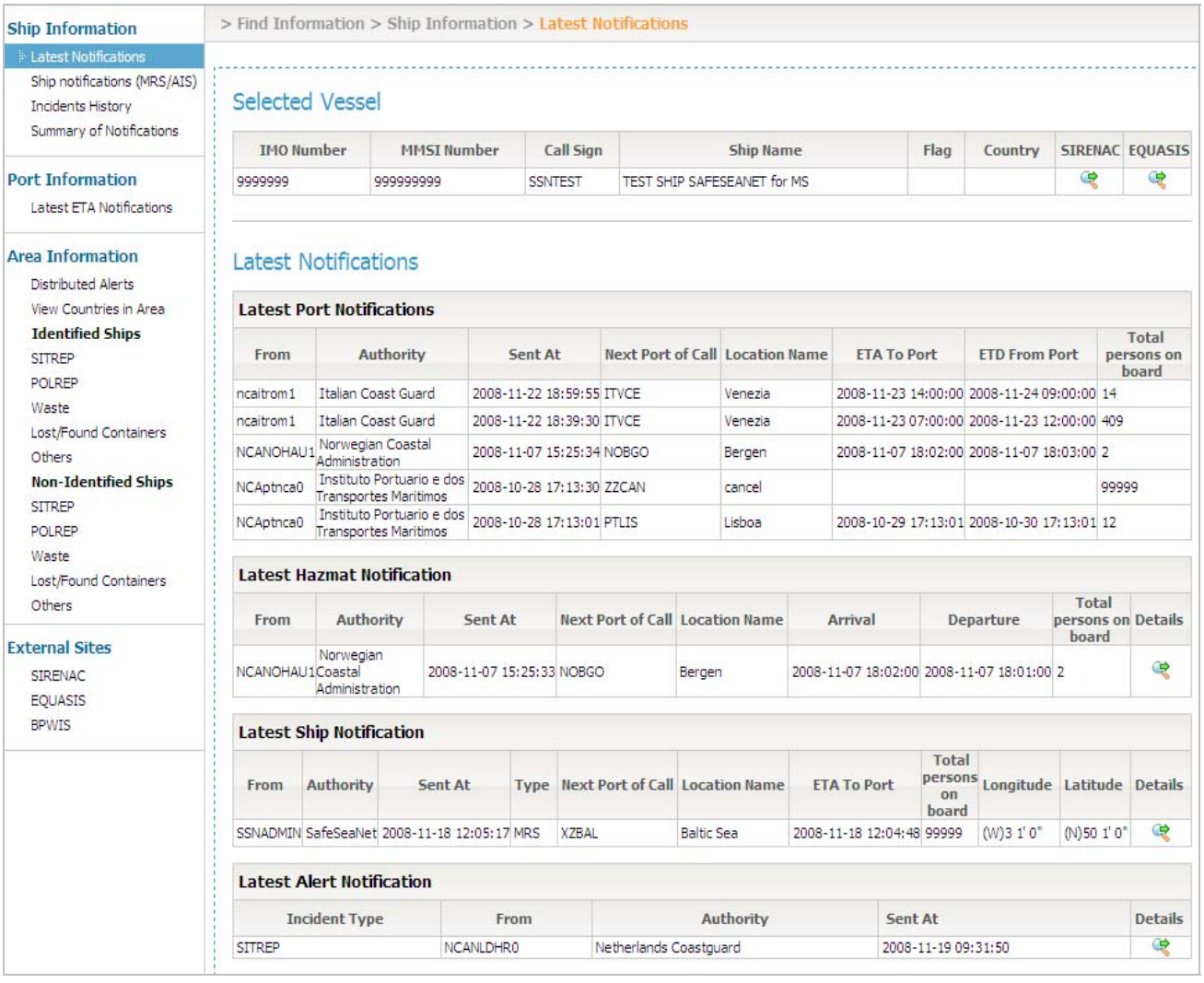
Incident reports can be sent for identified and unidentified ships.

5. What can be Requested?

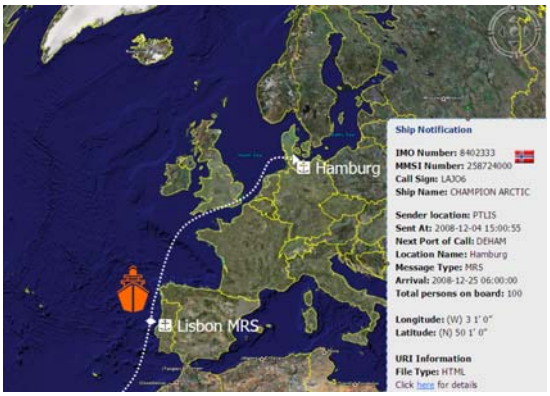
SSN users can request information based on:

- ship identifier (IMO, MMSI, Call Sign and name).
- next port of call.
- area (maritime location).

a. Ship Information: This type of information is specific to a given ship, and is divided into four parts: Latest notifications; Ship notification (AIS/MRS); Incident history and; Summary of notifications. A direct link to Sirenac and Equasis is also provided.



Latest notifications – used to obtain detailed notifications on a given ship, with the latest available notifications being displayed.



Ship position based on AIS

- ***Ship notification*** – used to obtain the latest AIS and MRS notifications from a given ship.

- ***Incident history*** – used to obtain information on accidents/incidents relating to a particular vessel.

- ***Summary of notifications*** – used to obtain a total for all types of notifications sent to SSN within a given period (ETA from/to) relating to a specific port call.

b. Port Information: This is used to obtain detailed information about the latest port notifications sent for a specific port.

c. Area Information: This is used to provide an overview of all alerts emitted in a given geographical area. The requestor can search by identified or unidentified ship.

6. How to Get the Best Out of SafeSeaNet?

The previous sections describe the overview and functions of the SafeSeaNet system. So that users can get the best out of the system, the following are practical examples of what can be achieved:

Port Authorities

Support to the management of port entries:

There is a queue of vessels to a particular terminal and the port officer would like to confirm the order of arrivals in order to organise the incoming traffic and arrange cargo transhipments. The port officer can enter SSN and search, not only for the port arrival information, but also for the latest position of the vessels. The latest positions are based on the ship notification messages gathered in the MRS or by means of the AIS. After obtaining the data, the port officer may decide on the order of port entries.

VTS Centres

Cross checking Hazmat information:

A vessel entering a VTS area reports that it has dangerous or polluting goods on board. To check the information, the VTS operator goes into the SSN application, searches in the latest notifications by the vessel identifier and retrieves the latest information on the dangerous or polluting goods carried on board.

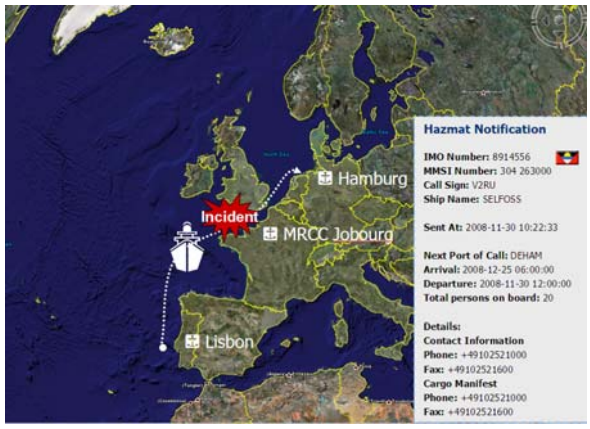
Vessel posing a risk:

A vessel leaving a VTS area was involved in a close-quarters situation after breaking COLREG rules. The VTS supervisor needs to send a warning that the vessel may pose a potential risk to other Member States along the route and to the destination port. This can be done using the SSN Incident Report Distribution function. The operator enters SSN, completes the details in the "send information" menu and sends the information to the MSs concerned.

MRCC Centres

Number of persons on board for SAR operation:

An emergency has been reported to an MRCC. The position and name of the affected vessel are known, but there is no data on the number of persons on board. This is crucial information in the Search and Rescue (SAR) operation. The MRCC duty officer just has to enter SSN and search for the vessel's latest notifications. Information on the planned port call, or notification of hazardous or polluting goods, also has data on the number of persons on board.



SAR operation

Estimation of potential pollution:

An emergency has been reported at sea. A vessel has sunk and the SAR operation is still in progress. After dispatching teams to the scene, the evaluation team wants to know the risk of pollution. The MRCC duty officer enters the SSN application and searches for the vessel's latest notifications. Using the details in the Hazmat notification, the MRCC can properly assess the related risk.

Maritime Assistance Services (MAS)

Hazmat information and incident history:

There is a vessel adrift at sea due to engine failure. The weather has started to deteriorate and there is a danger that the vessel may run aground within 12 hours. The MAS officer needs to evaluate the situation using information on dangerous and polluting goods carried on board. He/she is also aware that information on previous such incidents can also be of significant importance in the decision making process. The MAS officer enters SSN, searches in the latest notifications by the vessel identifier and retrieves the latest information on dangerous or polluting goods as well as information on the latest incidents/accidents relating to the vessel.

7. Maritime Support Services (MSS):

This is EMSA's service for managing its vessel monitoring information systems and provides the user interface with SSN and other monitoring systems. The requirement to have systems as SSN and CleanSeaNet permanently accessible means that around-the-clock user support is necessary.

Monitoring centre

The first phase began on 1st June 2007, and since 5th January 2009 (Phase 2), EMSA operators have provided SSN users with a daytime support service every day, including weekends and holidays.

This primarily involves monitoring the SSN application, prior to other information systems being included, such as LRIT and STIRES (see later). The MSS will become fully operational on a 24/7 basis by mid-2009 (Phase 3).

Properly qualified and trained operators provide a high quality and reliable service using state-of-the art IT technology. The quality of the data transmitted to SSN is checked daily, and reports are completed monthly to monitor its evolution. The applications and overall service quality are constantly monitored in order to support maximum availability of the system, and to ensure rapid reaction should a failure be detected.

What does the MSS provide?

The MSS will act has a single point of contact for SSN users. It will provide:

- a Helpdesk for SSN and other applications.
- a monitoring capability for EMSA's information systems.
- a single point of contact to report pollution, or to request assistance to minimise the consequences of pollution (ie oil pollution response vessels, satellite imagery and/or expert assistance).
- updated lists of banned vessels and single hull tankers.

How to contact the MSS?

- ***Working days***: 9h - 18h, Lisbon time (UTC)
- ***Weekends*** and ***holidays***: 9h - 17h30 (UTC)

Tel: +351 211 209 415
Fax: +351 211 209 480
Email: MaritimeSupportServices@emsa.europa.eu

8. 2009 Developments

In mid-2009, the following capabilities will become operational and will be monitored by the MSS:

The SafeSeaNet Traffic Information Relay and Exchange System (STIRES) module

This will allow near "real-time" exchange of AIS data with, and between, the Maritime Administrations of Member States. The system will be fully integrated into SSN. A benefit of creating a single EU server will be that this data can be correlated with other data already stored in the system. STIRES will enable the tracking of ship movements along the entire EU coastline based on AIS information provided by Member State AIS networks. With the information stored and accessible at a central EU level, it will be possible to visualise data for the EU coast on a GIS platform.

The European Union LRIT Data Centre

This will be one of the worldwide network of Long Range Identification and Tracking (LRIT) centres, which will provide satellite based ship identification and position information on a global basis. In Europe, it will complement the AIS based information provided by STIRES.

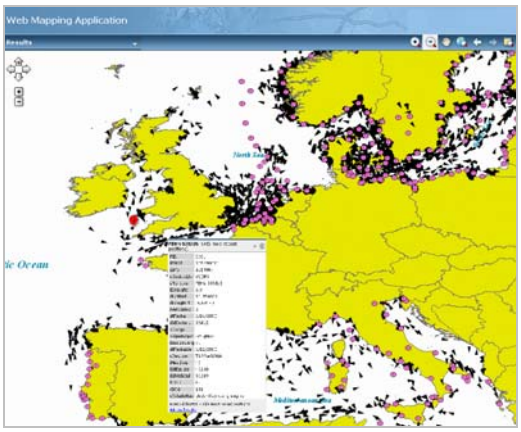


Image of STIRES application (GIS)

Further Information:

Further information on SSN and all the other activities of the Agency be accessed at:
http://www.emsa.europa.eu
https://extranet.emsa.europa.eu