

Integrated Maritime Services EMSA integrated data

IMDatE Meeting
19 October 2012

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Machteld Price

**EMSA - European Maritime Safety Agency
C.3.4 Maritime Monitoring Services**

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Possible Use Cases:

- a) Search and Rescue (SAR)
- b) Vessel Traffic Services (VTS)
- c) Integrated Ship profile

**Maritime
Community**

2. Integrated Maritime Surveillance Concept

Pilot Projects

- a) Anti-Piracy Monitoring (MARSURV-1)
- b) Border control (MARSURV 2)
- c) Fishery control (MARSURV-3)

**Examples in other
maritime domains**

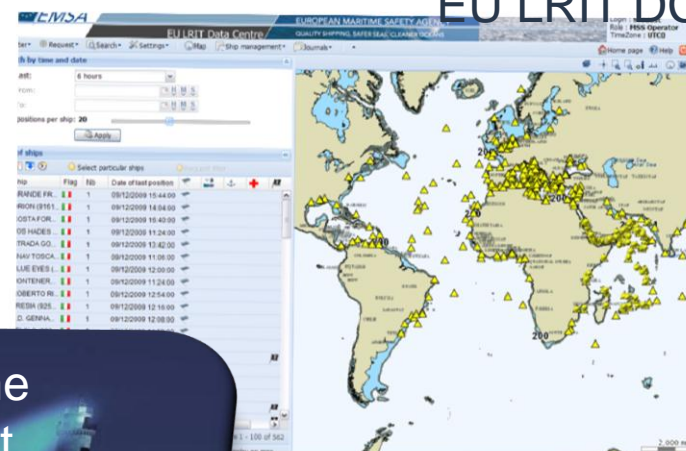
3. Way forward

EMSA operational systems

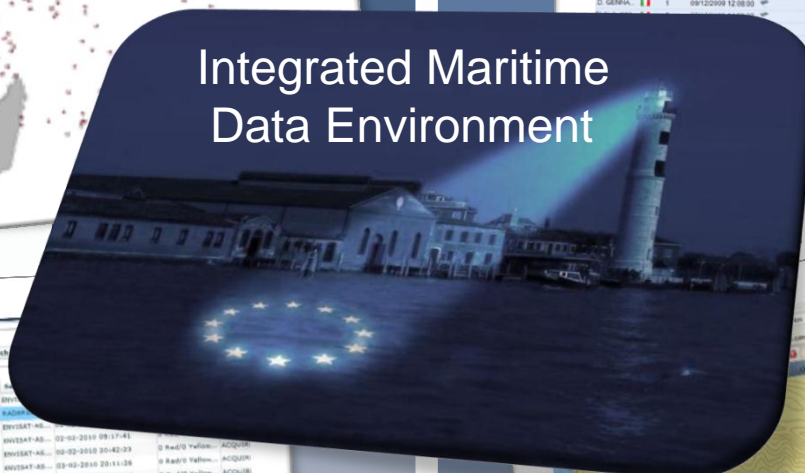
Sat-AIS DC



EU LRIT DC



Integrated Maritime Data Environment



CleanSeaNet



SafeSeaNet

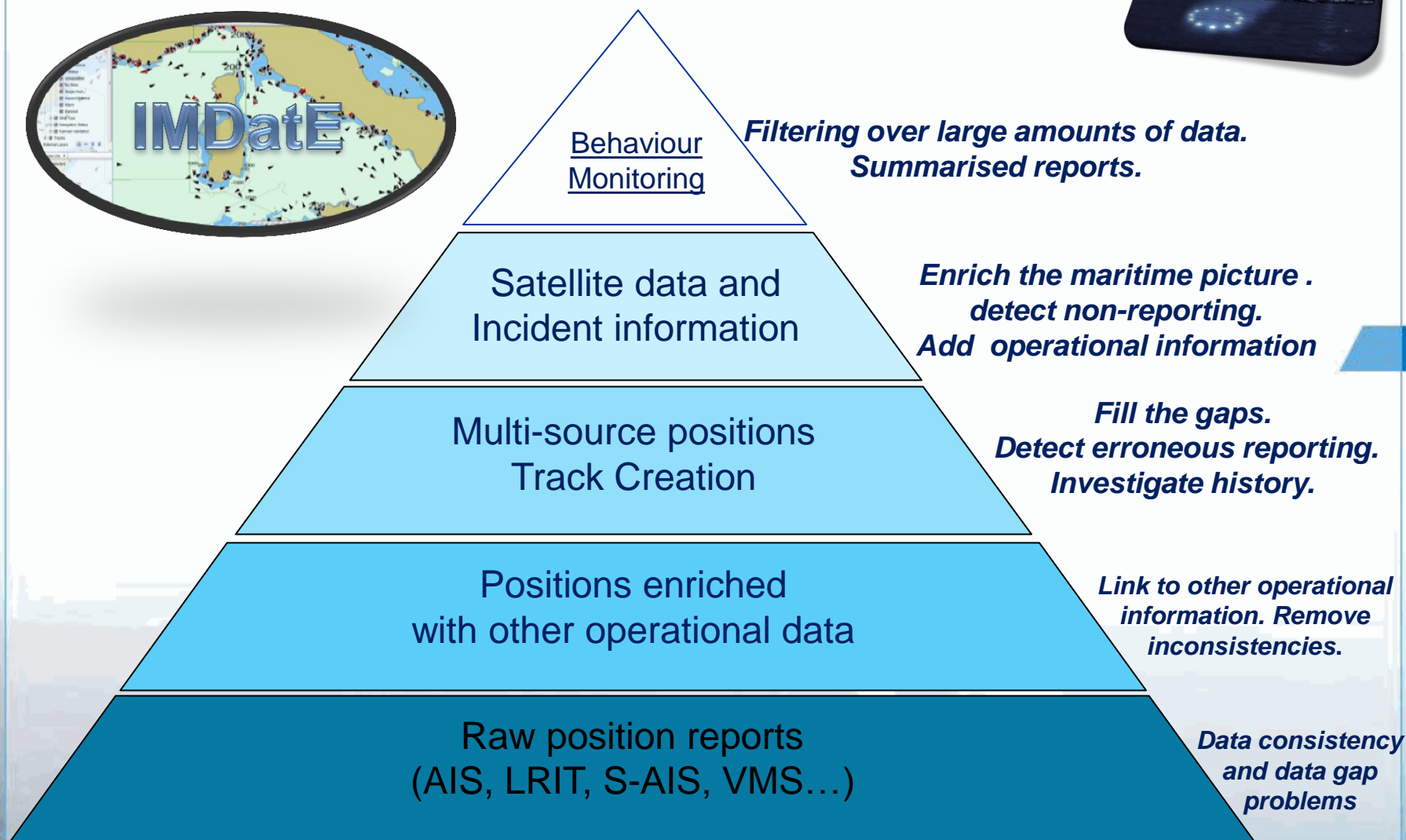
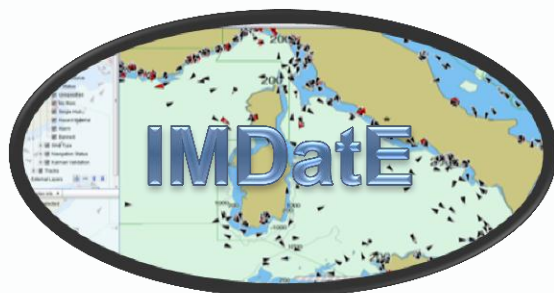


1. Integrated Maritime Monitoring Concept

Possible Use Cases

- a) Search and Rescue (SAR)
- b) Vessel Traffic Services (VTS)
- c) Integrated Ship profile

1 – Intro: Maritime Data – Higher Value Services



Behaviour
Monitoring

*Filtering over large amounts of data.
Summarised reports.*

Satellite data and
Incident information

*Enrich the maritime picture .
detect non-reporting.
Add operational information*

Multi-source positions
Track Creation

*Fill the gaps.
Detect erroneous reporting.
Investigate history.*

Positions enriched
with other operational data

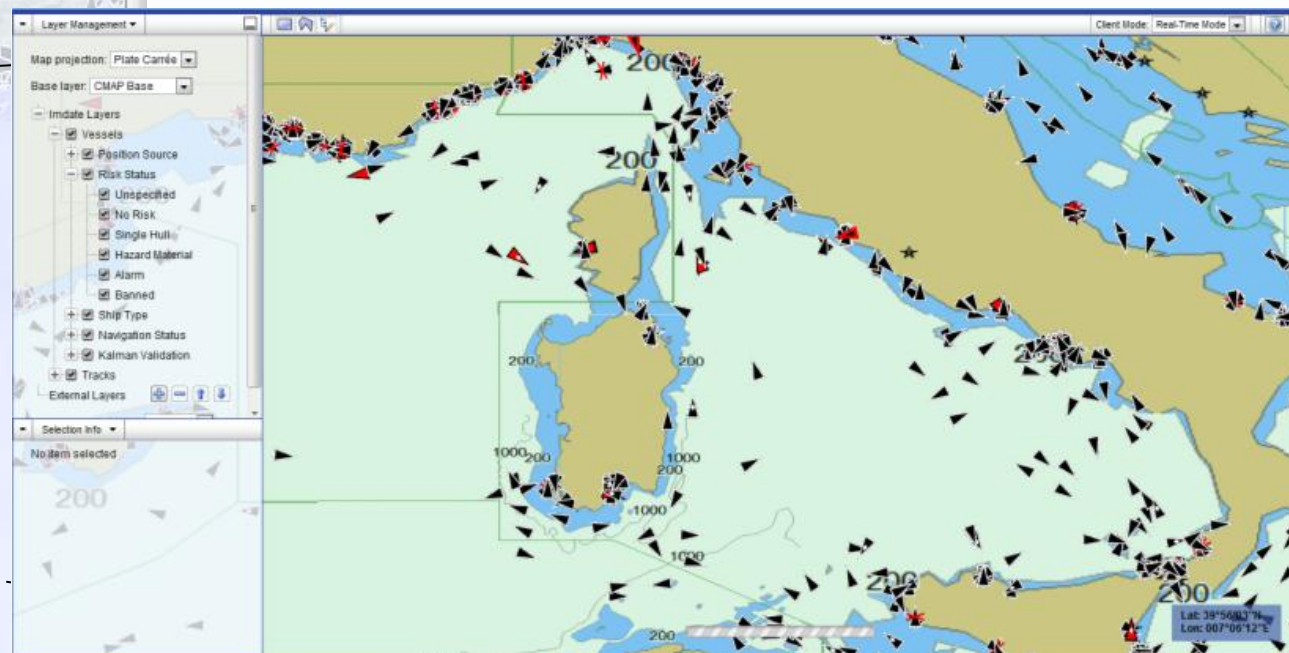
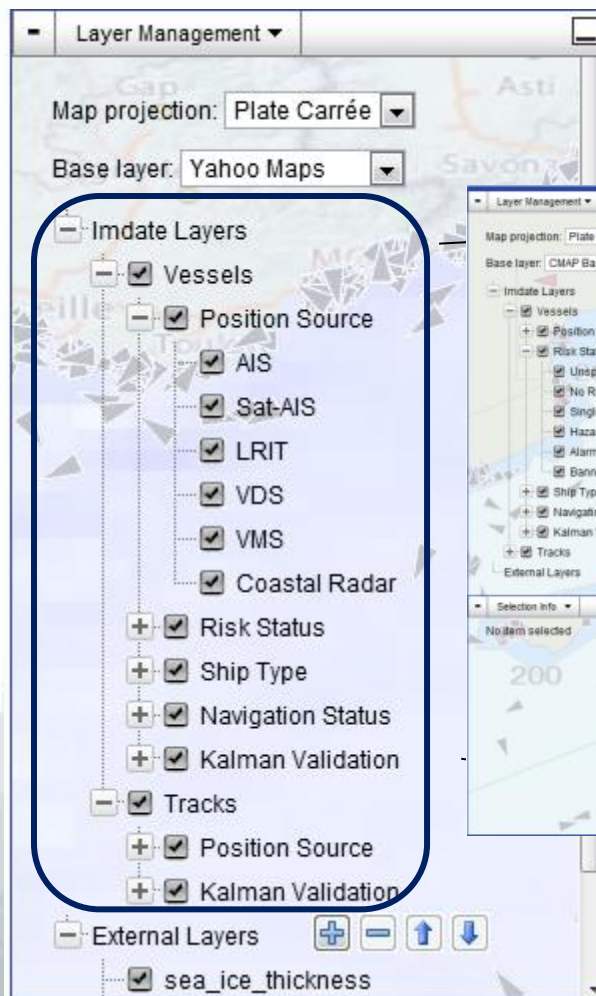
*Link to other operational
information. Remove
inconsistencies.*

Raw position reports
(AIS, LRIT, S-AIS, VMS...)

*Data consistency
and data gap
problems*

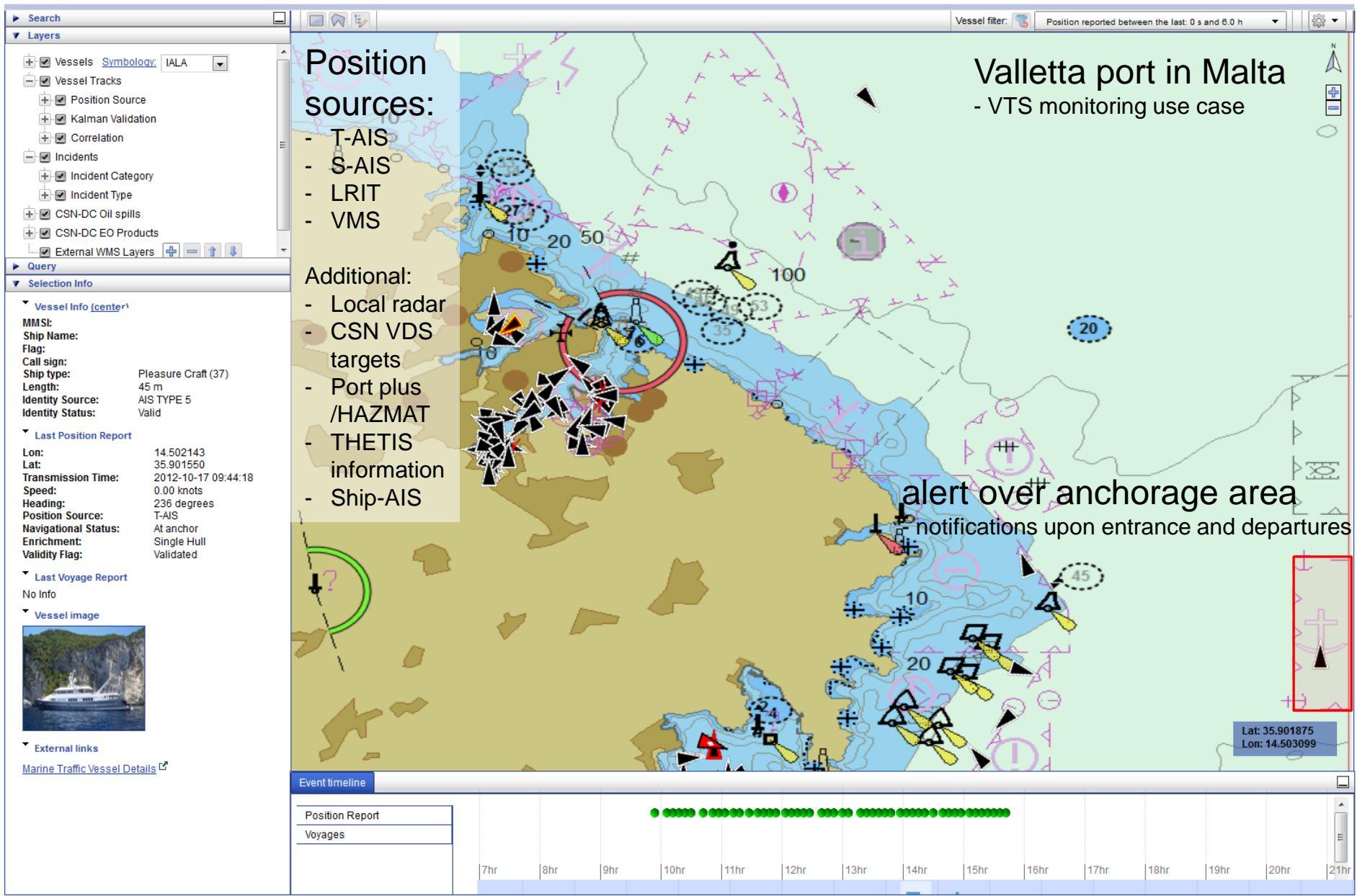
1 – Intro: Visualisation platform

Multiple layers of data

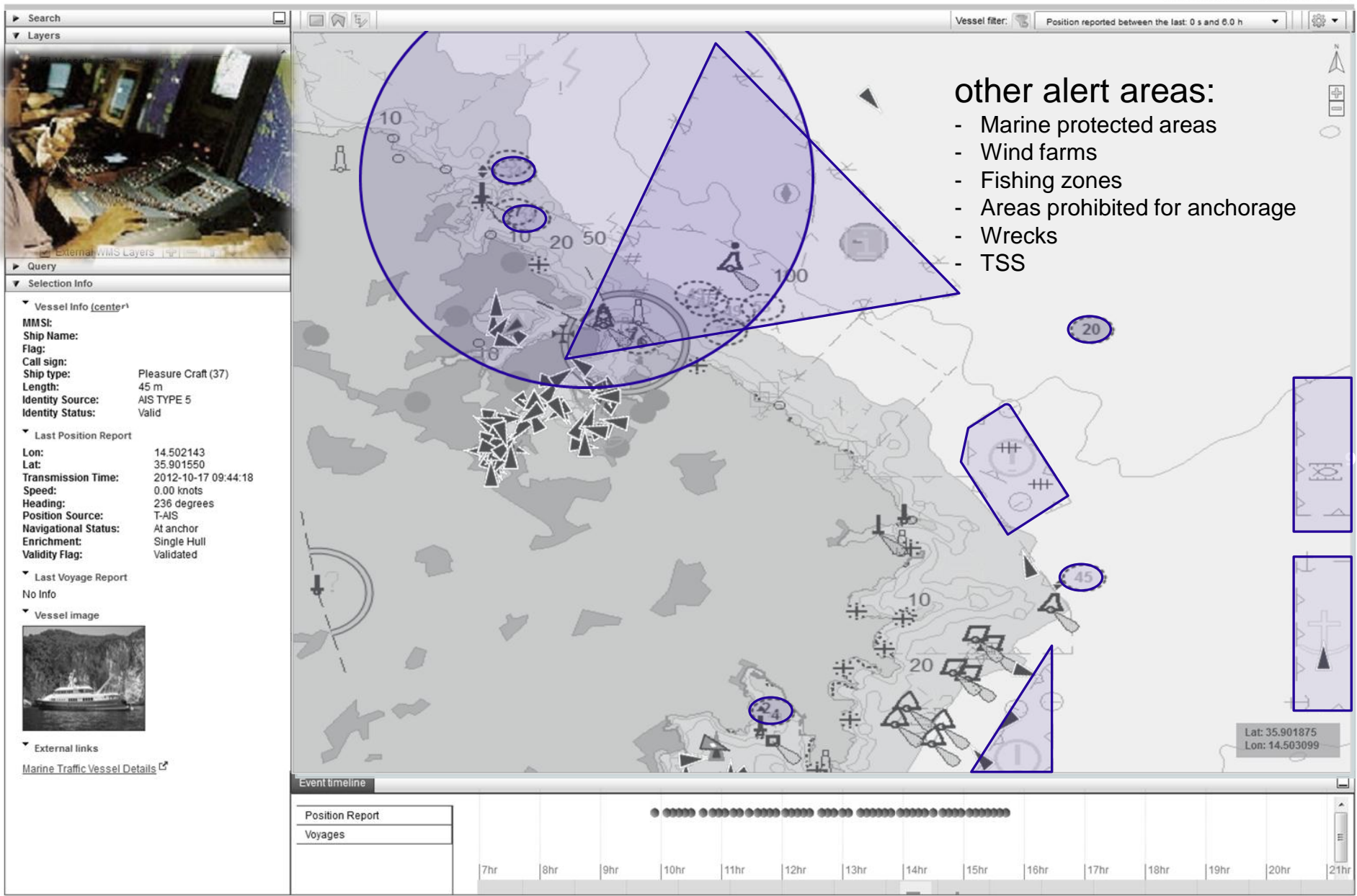


Visualization of ship details

1b – Possible Use Case: VTS



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1b – Possible Use Case: VTS

Imdate Client

127.0.0.1/imdate_head/imdate-wup-client/index.html#

Logged as bill for default project Logout

Position reported between the last: 0 s and 24.0 h

Search in Map

Vessel search

New search...

MMSI

Area Centric Query

Area

Lat: 49° 43' 16" N

Lon: 0° 40' 48" W

+/- 10 Nm

Time

2012-10-18

h 0 min

Service options:

☒ Vessel Tracks

Position sources: ALL

☐ Uncorrelated Positions

☒ Incidents

Category: All

Type: All

☐ CSN-DC Oil spills

☐ CSN-DC EO Products

Submit

Set as default

Load default

Cancel

Total records: 3

ID	Type
ALR_01	Rendezvous
ALR_02	Reserved Zone Entry
ALR_04	Route Check

Imdate Client

127.0.0.1/imdate_head/imdate-wup-client/index.html#

Logged as bill for default project Logout

Position reported between the last: 0 s and 24.0 h

Search in Map

Vessel search

New search...

MMSI

Vessels

No vessel found

Apply filter

Remove filter

Layers

Query

Selection Info

No item selected

Route Check Alert ALR_04

Type: Route Check

Timestamp: 2012-10-17 03:00:00

Lon: 003°10'48"W

Lat: 50°17'24"N

Description: Alert description

Reserved Zone Entry Alert ALR_02

Type: Reserved Zone Entry

Timestamp: 2012-10-16 22:00:00

Lon: 001°43'48"W

Lat: 49°10'12"N

Description: Vessel entered in reserved zone

Rendezvous Alert ALR_01

Type: Rendezvous

Timestamp: 2012-10-18 06:47:00

Lon: 000°40'48"W

Lat: 49°43'16"N

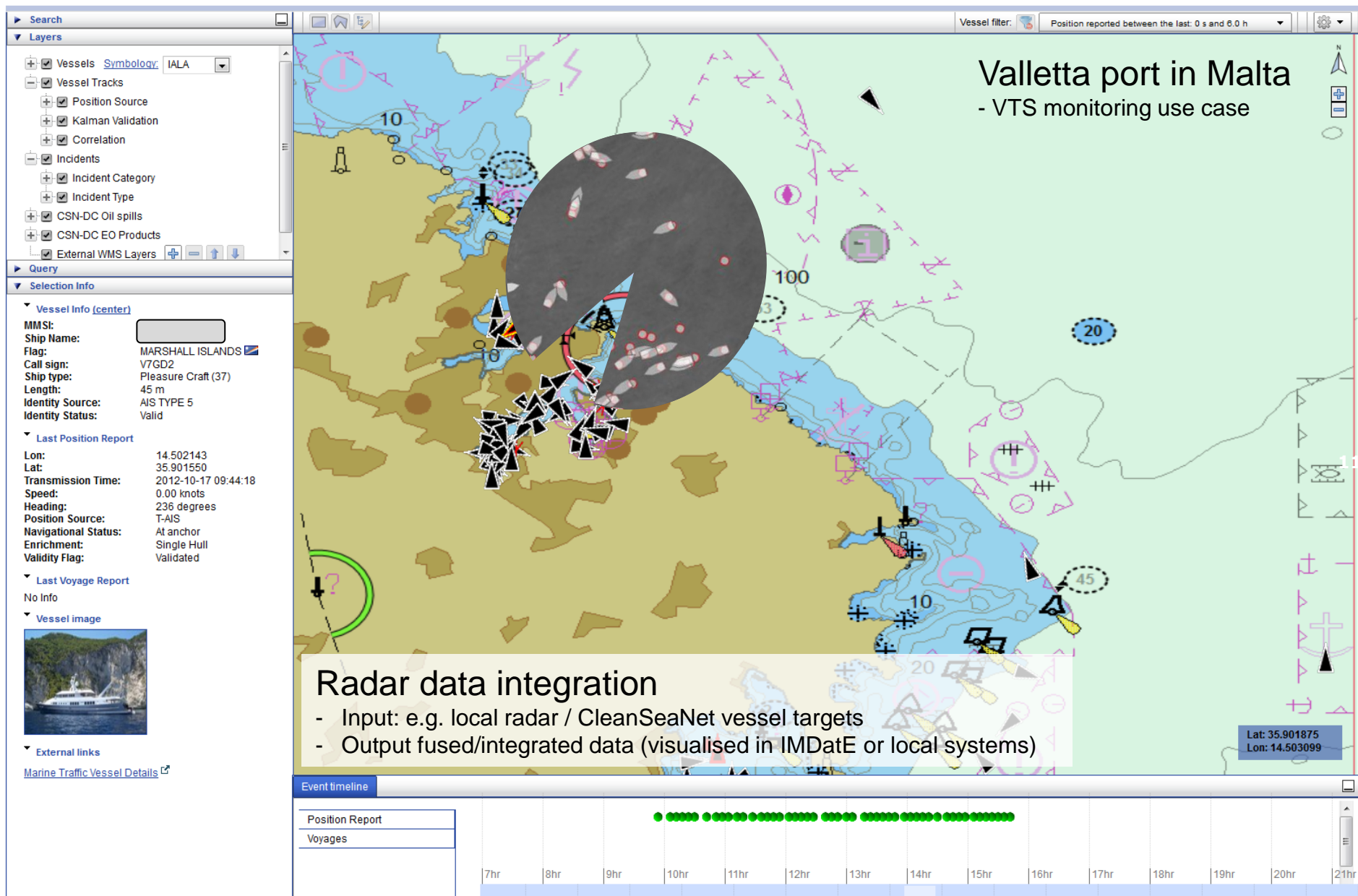
Description: Rendezvous between two vessels

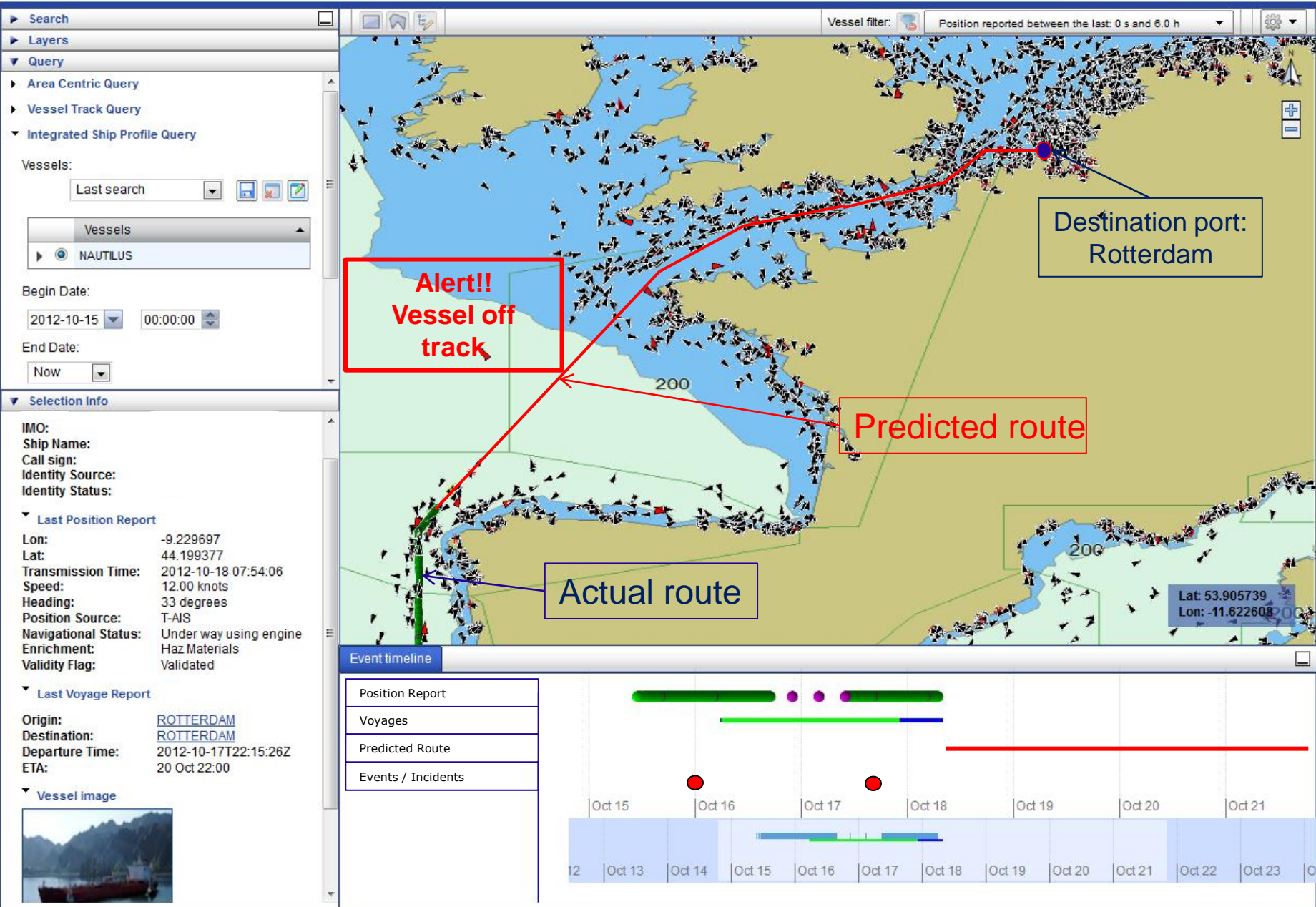
Involved Vessels: EYPERE DANIEL, EYL EUROPE

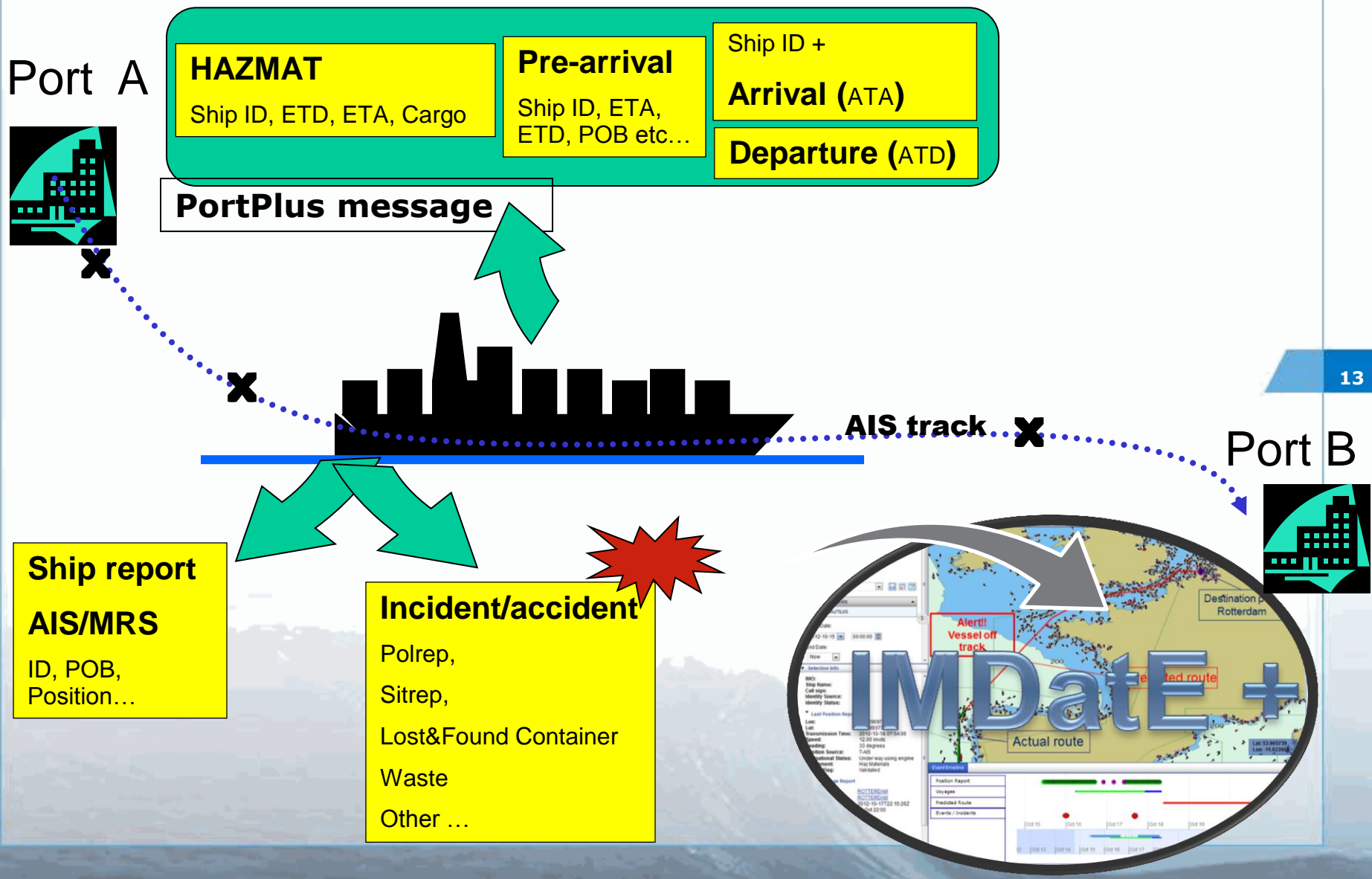
Active Alerts

Total records: 3

ID	Type	Lat	Lon	Timestamp
ALR_01	Rendezvous	49.721	-0.68	2012-10-18 06:47:00
ALR_02	Reserved Zone Entry	49.17	-1.73	2012-10-16 22:00:00
ALR_04	Route Check	50.29	-3.18	2012-10-17 03:00:00







2. Integrated Maritime Monitoring Concept Pilot Projects

- a) Anti-Piracy Monitoring (MARSURV-1)
- b) Border control & Drugs Trafficking (MARSURV 2)
- c) Fishery control (MARSURV-3)

2a – anti-piracy support merchant fleet monitoring (pilot project *MARSURV-1* for EUNAVFOR)

Dedicated services: MarSurv combines relevant EMSA vessel traffic and satellite information with vessel-related piracy risk information from EUNAVFOR.

The result: a near-real-time, enhanced maritime "white picture" of the users area of interest.



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EMSA data	EUNAVFOR data
EU LRIT	Int. LRIT up to 85%
Sat-AIS	Piracy Risk register (incl. measures, communication info)
Ship-AIS	Piracy incidents
Terr.-AIS	

2c - Fishery control monitoring (*pilot project MARSURV-3 for EFCA*)

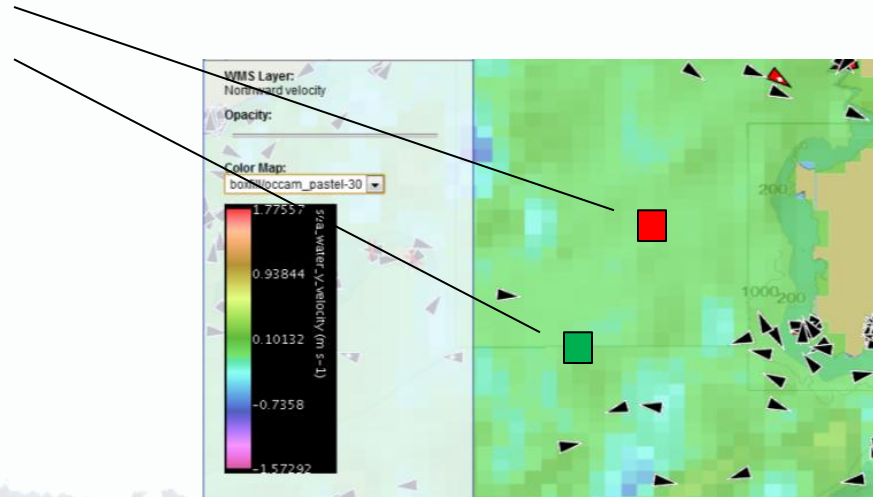
- The European Fisheries Control Agency (EFCA) coordinates the monitoring of Bluefin Tuna fisheries in the Mediterranean Sea and the Eastern Atlantic waters.
- The control, inspection and surveillance of fishery activities both at sea and ashore are done in cooperation with the Member States and the Commission.
- The MARSURV-3 pilot project began on 15 May and covered six pre-defined zones of interest in the Mediterranean Sea.
- The MARSURV-3 monitoring service combines specific fisheries information with maritime data available at EMSA for which access has been granted.
- The project was developed using the first version of EMSA Integrated Maritime data Platform (IMDatE).

2c - Fishery control monitoring (pilot project *MARSURV-3* for EFCA)

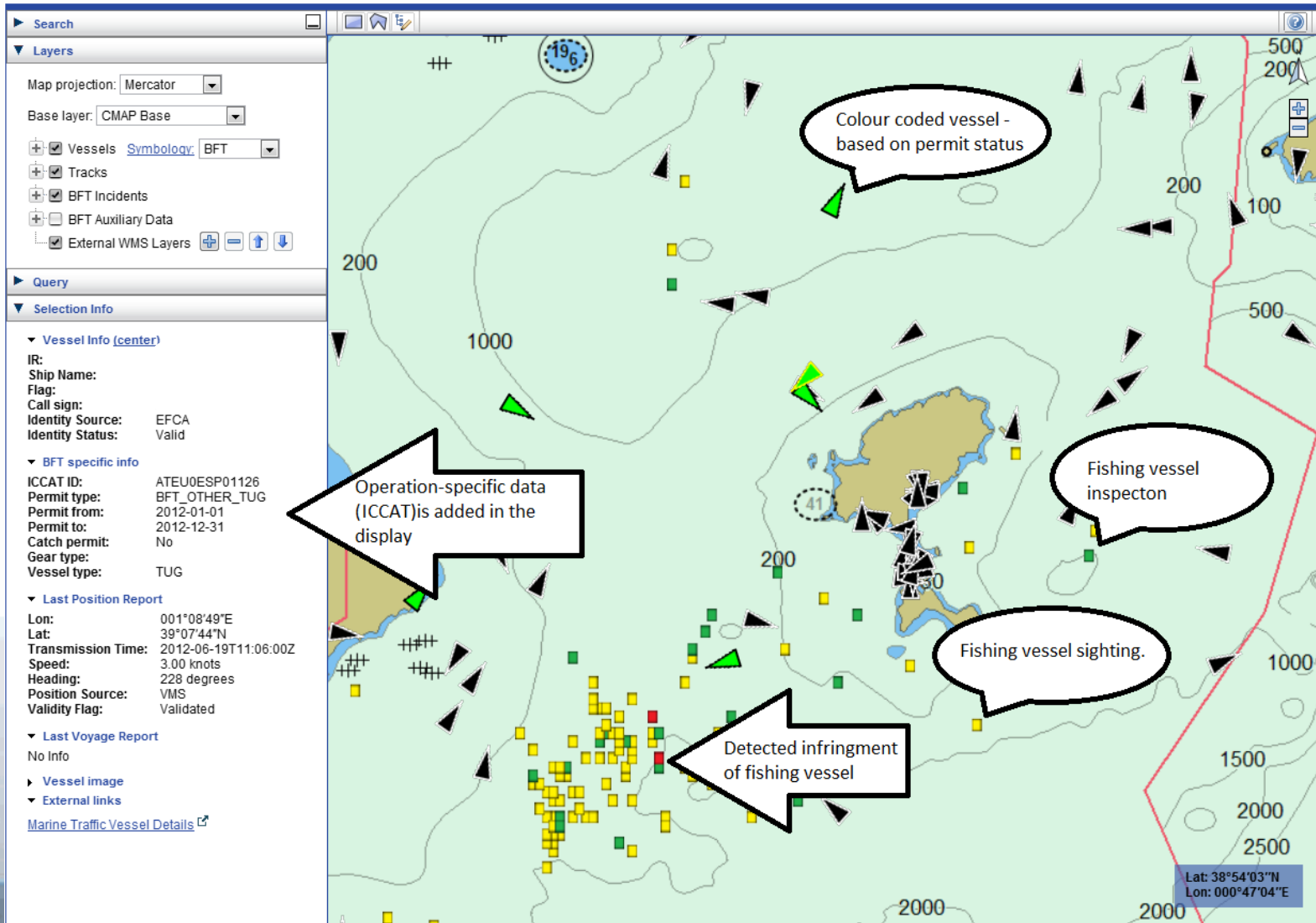


On-site inspections,
intelligence data,
sightings, etc.

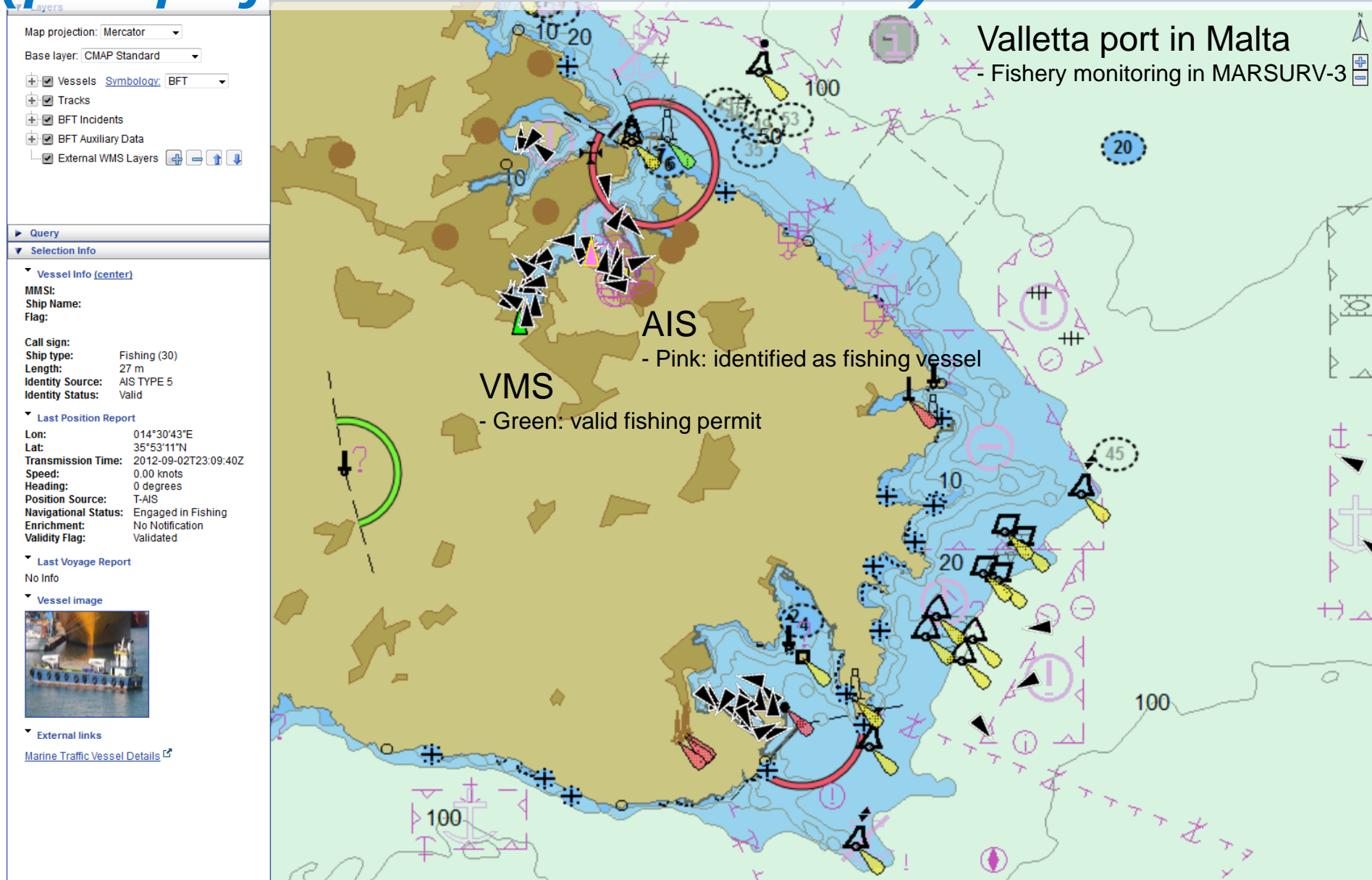
Visualisation of external information



2c - Fishery control monitoring (pilot project *MARSURV-3* for EFCA)



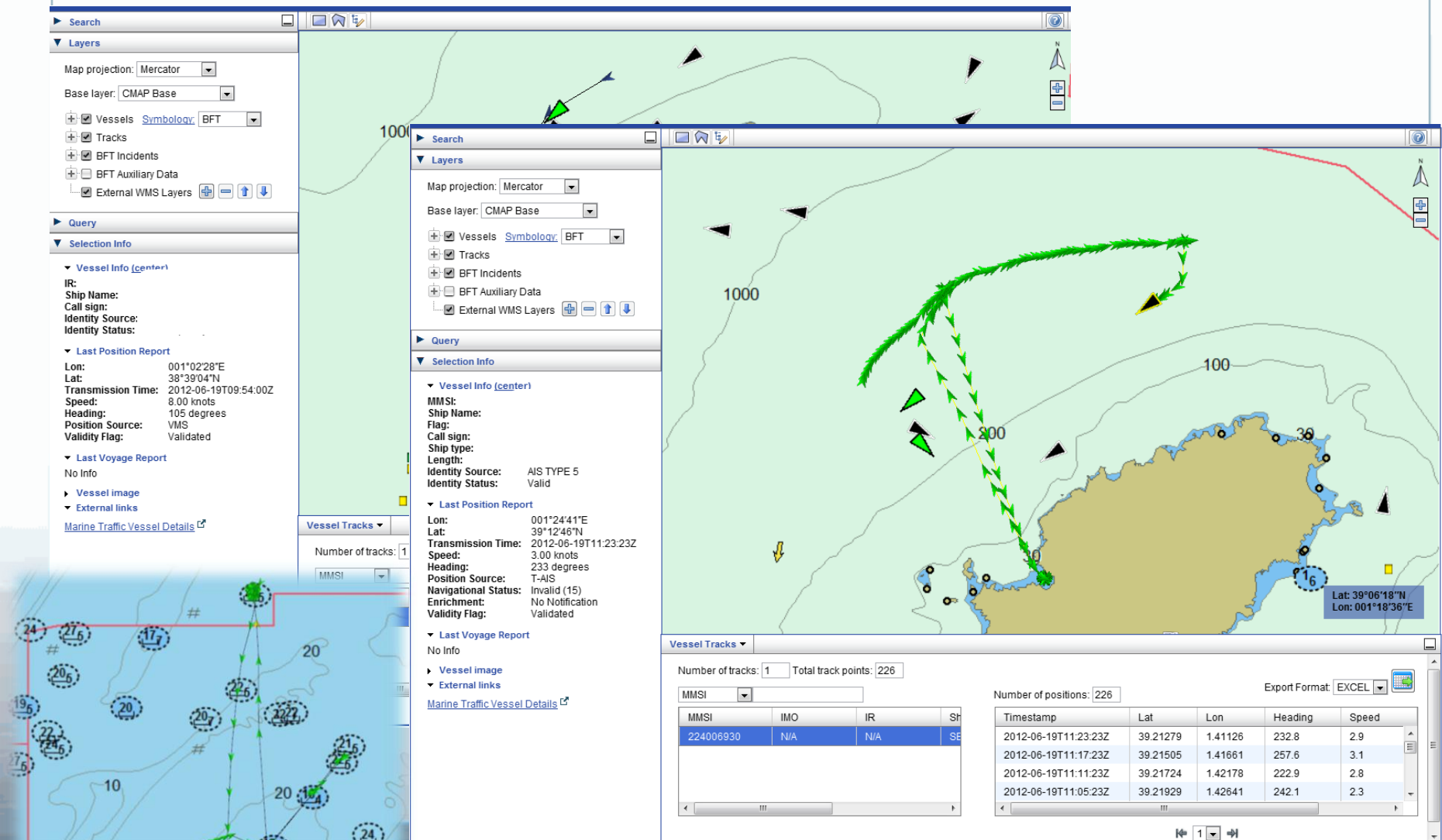
2c - Fishery and maritime traffic control monitoring (pilot project MARSURV-3 for EFCA)



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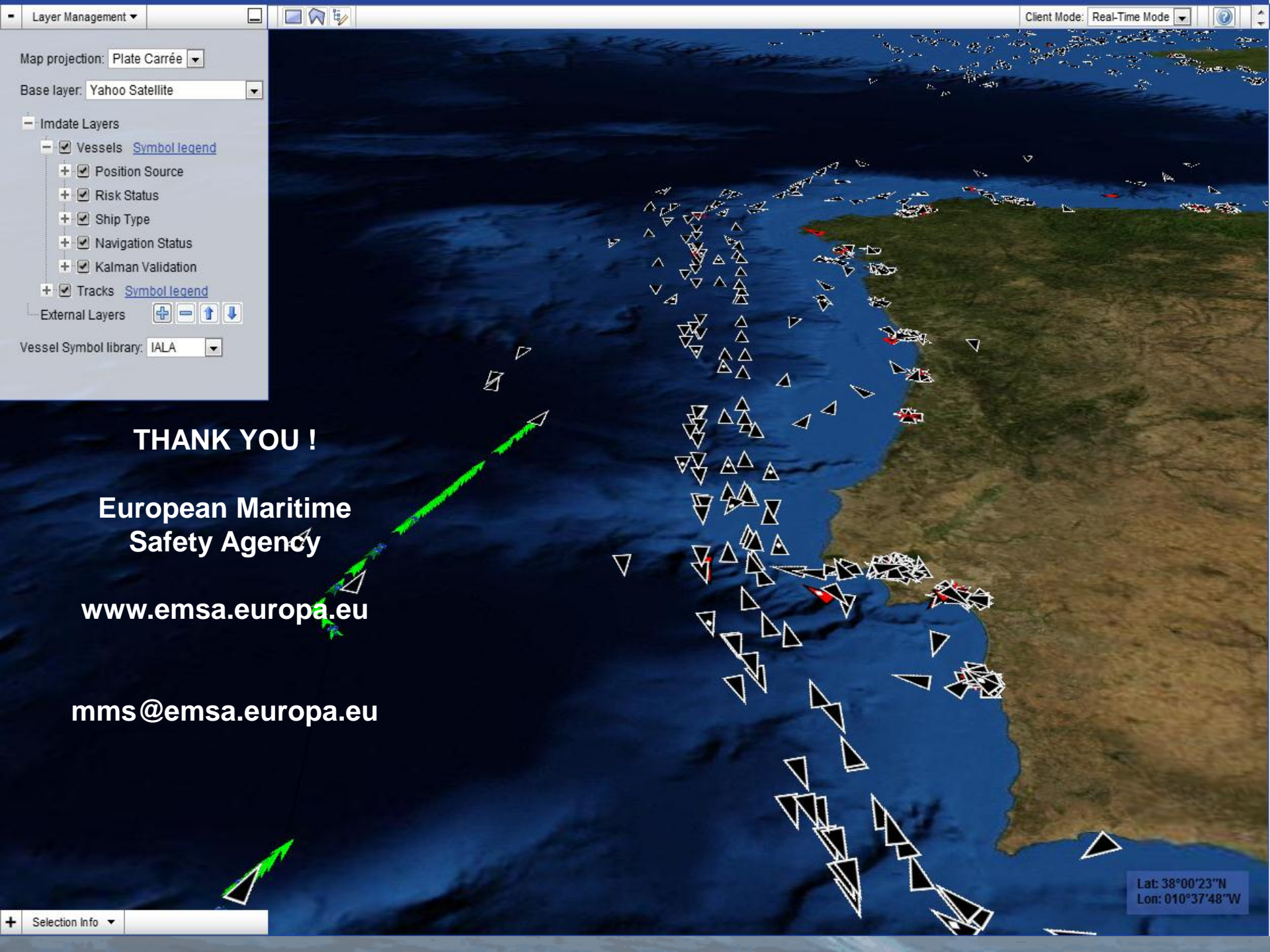
EUROPEAN MARITIME SAFETY AGENCY

QUALITY SHIPPING, SAFER SEAS, CLEANER OCEANS



3 - Way forward

- IMDatE has demonstrated:
 - good interchangeable integrated platform for EMSA services
 - the benefit of integrated data fusion and visualization tools
 - Flexible import and export of new data or information streams
- Options for the future with regards to maritime services to MS:
 1. EMSA to design together with MS also a permanent integrated “Maritime Monitoring” service for daily monitoring duties and to support operations for the maritime community
 2. EMSA to provide *ad-hoc* support for specific operations



THANK YOU !

**European Maritime
Safety Agency**

www.emsa.europa.eu

mms@emsa.europa.eu