

Fisheries Monitoring Centre (FMC) Blue Fin Tuna (BFT) Fishery

*3rd Automated Behaviour Monitoring (ABM)
Workshop (Lisbon, 12th September 2017)*

By

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How a FMC/VMS works?

IRIDIUM SAT



GPS SAT



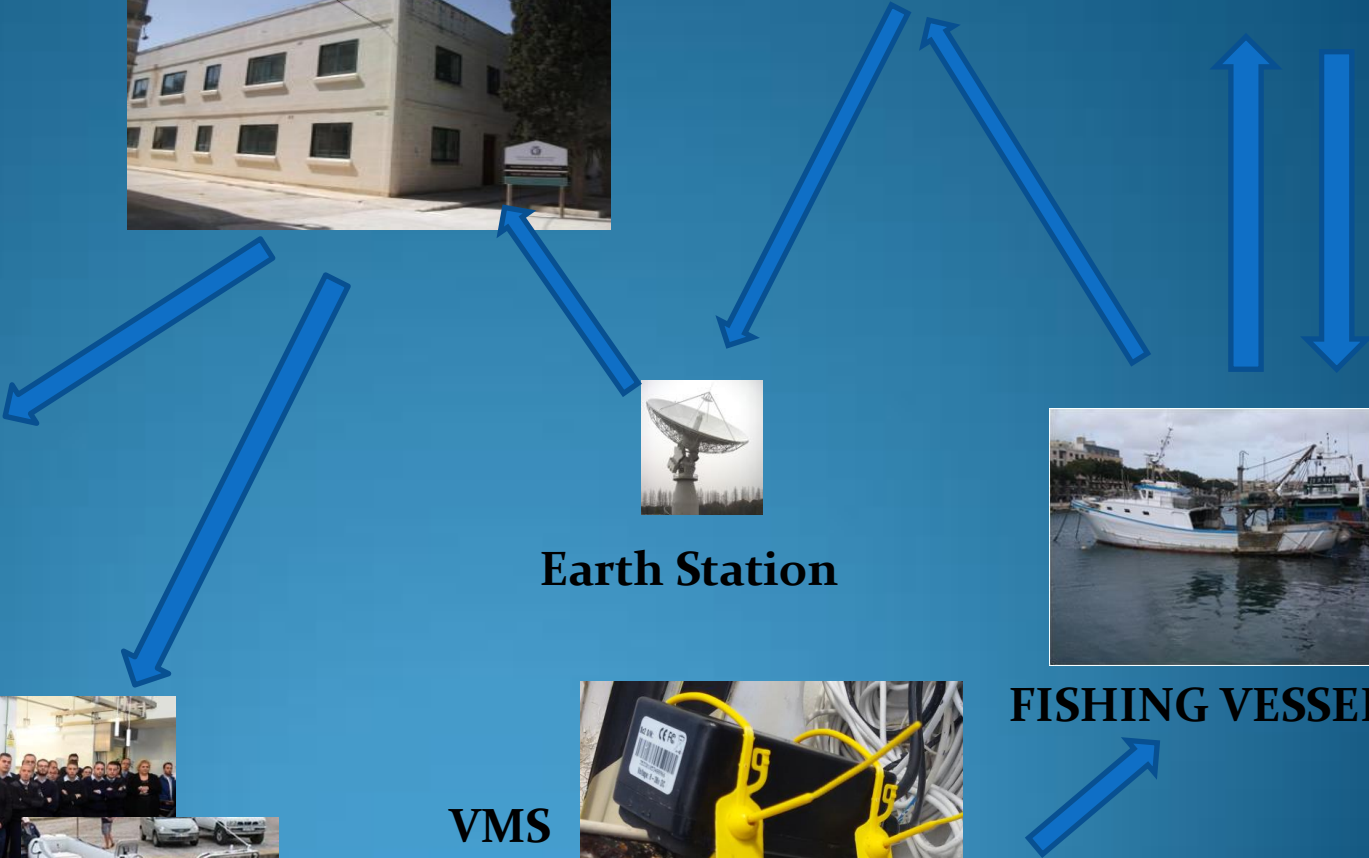
Earth Station



VMS



FISHING VESSEL



Malta's Vessel Monitoring System (VMS)

Article 16 of Cap 425.07

Article 18 to 27 of (EU) No 404/2011 Commission Implementing Regulation

Article 9 (1) of Council Regulation (EC) No 1224/2009

Article 9 (2) of Council Regulation (EC) No 1224/2009

Article 9 (9) CR of (EC) No 1224/2009

What is a VMS?

The most basic function of a VMS is to determine the vessel's location at a given time, and periodically transmit this information to a Fisheries Monitoring Centre (FMC).



ID: 425699377
Label: Marie De Lourdes 1
Reg: MFA7116
Speed: 1.2125 mph, Dir: W
Last: 01/04/2016 11:27:38
Pos: 34.54921, 14.32107
Ghan Tuffeha, Malta

Article 19 of Commission implementing Regulation (EU) No 404/2011

Article 9 (3) of CR (EC) No 1224/2009

Malta's Fisheries Management Zone cont..

Trawlers permitted to operate within the FMZ are only authorised to operate in designated zones as per Annex V of Council Regulation (EC) No 1967/2006 and Article 23 of Commission Implementing Regulation (EU) 404/2011

Out of the 12 trawlers in the Maltese fishing fleet, 7 are permitted to operate inside the 25 FMZ.

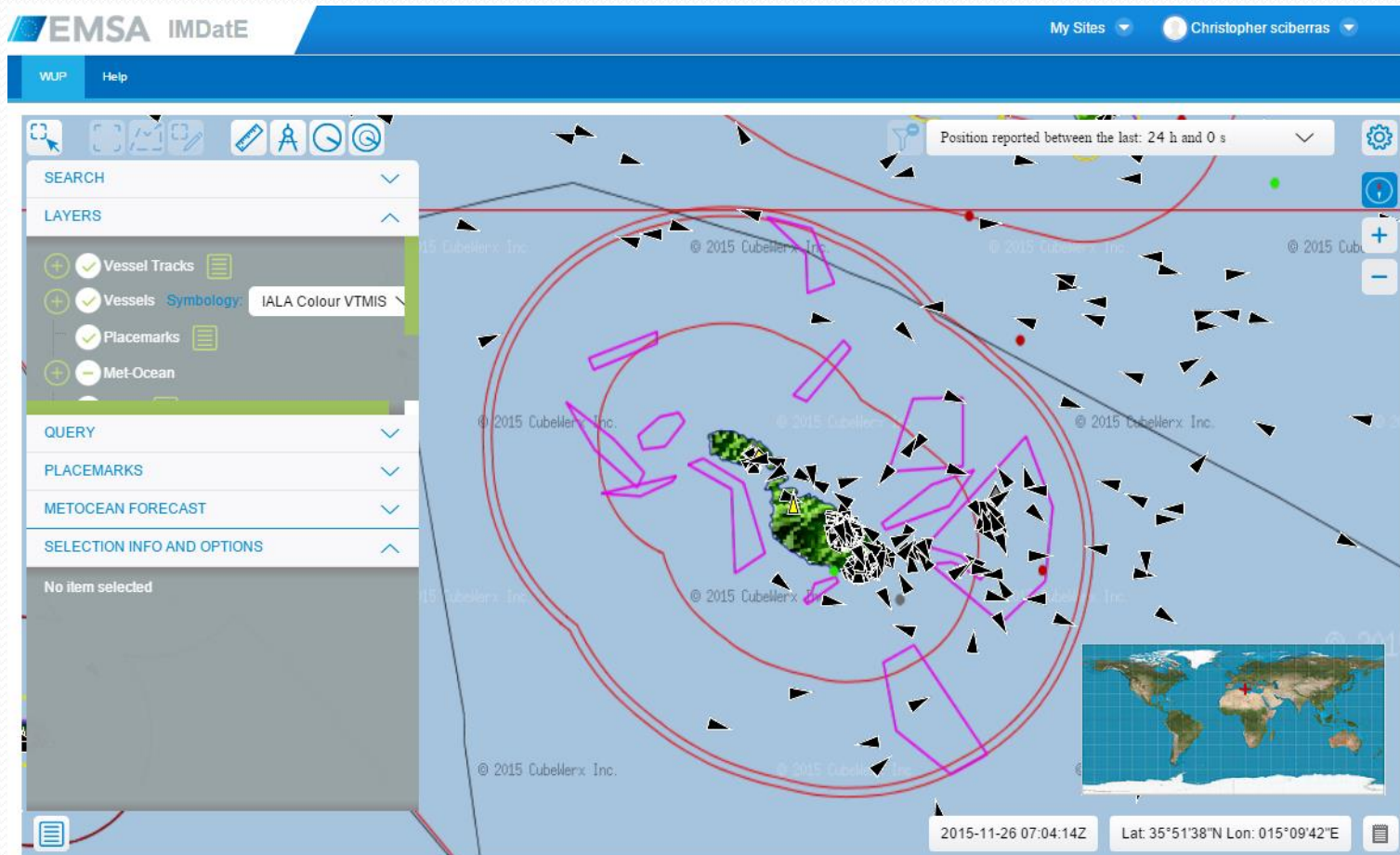
4 trawlers – In all waters within the 25 FMZ.

3 trawlers – In waters deeper than 200 metres only.

5 trawlers - not permitted to operate in the 25 nm FMZ.

Malta's 25 nm Fisheries Management Zone

Introduction of AIS monitoring



With the introduction of the IMDatE and Automated behaviour monitoring, it has proven very Important to Fisheries due to the high level of F/V traffic around / entering Malta's 25 nm Fisheries Management Zone (FMZ).

ABM SCENARIO 1

VMS fail - ABM / In Area

1

EMSA IMDatE - Alert Report

ID: 1479725348387
 Surveillance code: InArea
 Surveillance instance: Mare Blu BFT Farm_clone
 Start Time: 2016-11-21T10:48:31-00:00
 End Time: 2016-11-21T10:48:31-00:00
 Event locations:

Longitude	Latitude
14.642	35.89

InArea event

status: OUT
 position.timestamp: 2016-11-21T10:48:31-00:00
 position.latitude: 35.89
 position.longitude: 14.642
 Involved vessels:

Imdate ID: 267472 MMSI:

Positions:	Timestamp	Longitude	Latitude	Heading	Speed
	2016-11-21T10:48:31Z	14.642	35.89	NaN	NaN

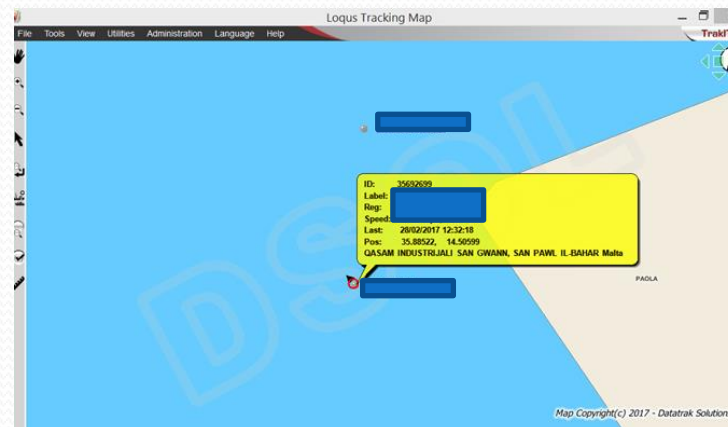
AIS alert sent to FMC

2



AIS is checked and vessel found at BFT farm

3



VMS screen shot showing vessel in port, port watch box was not triggered by the VMS as terminal was not operational.

Selecting a ABM-Encounter at sea

EDIT SURVEILLANCE

Name

Towing Vessels

Description

encounter

Type: AtSeaEncounter

Maximum Distance between Ships (meters)

10

Maximum Speed (meters per second)

1

Minimum Duration (seconds)

60

AOIs:

Session AOIs

Polygon32

Vessels of interest:

Vessels of interest:

Mode: Filter

Exact match

Flags: IN

Libyan Arab Jamahiriya
Algeria
Malta
Tunisia
Italy

Ship types: IN

Fishing vessel

Start date:

2017-06-12 17:50:00 Z

Stop date:

Alert policy:

At start

Distribution list:

MT Fishery

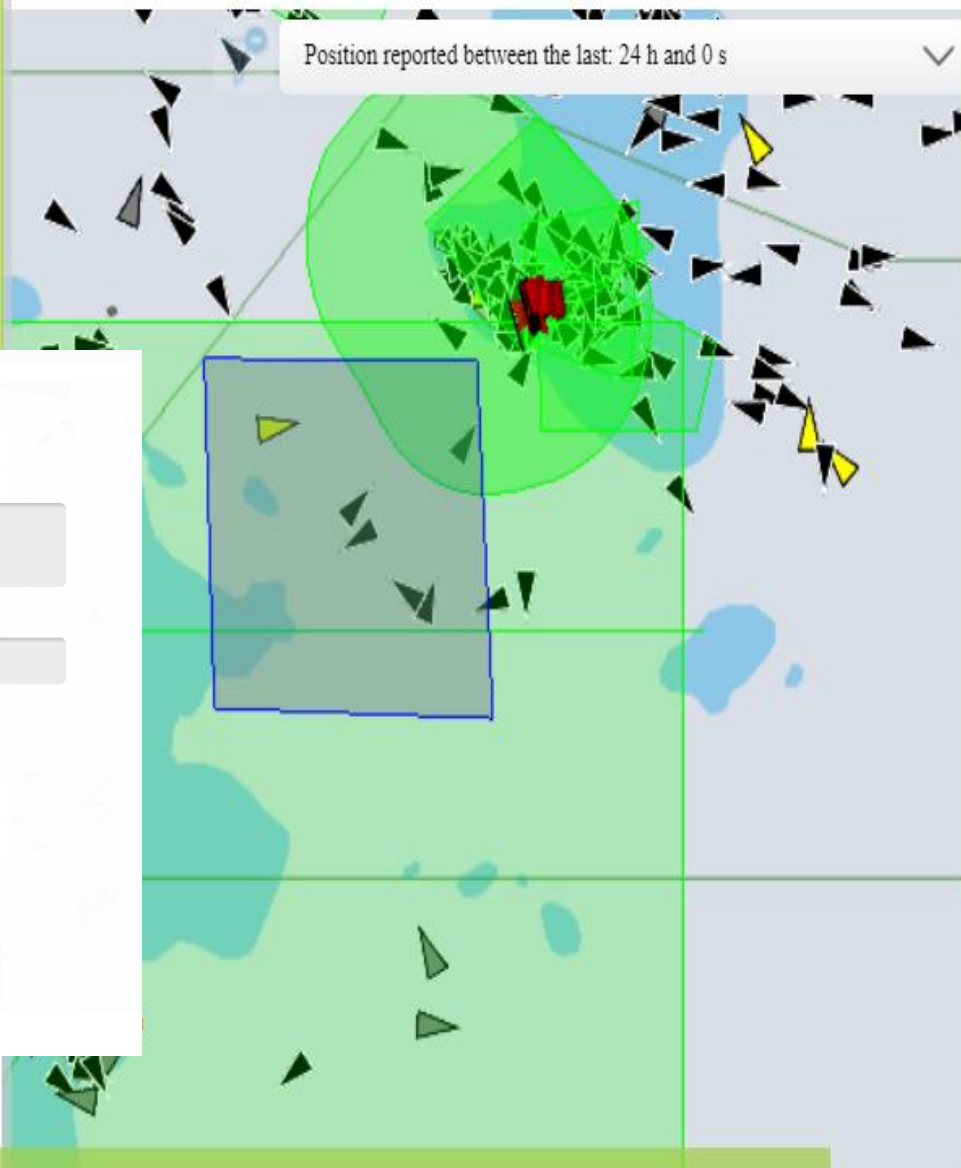
MT_FISHERIES
MT_SCIBERCH

SET

CANCEL



Position reported between the last: 24 h and 0 s



ABM SCENARIO 2

Encounter at sea



ABM SCENARIO 2

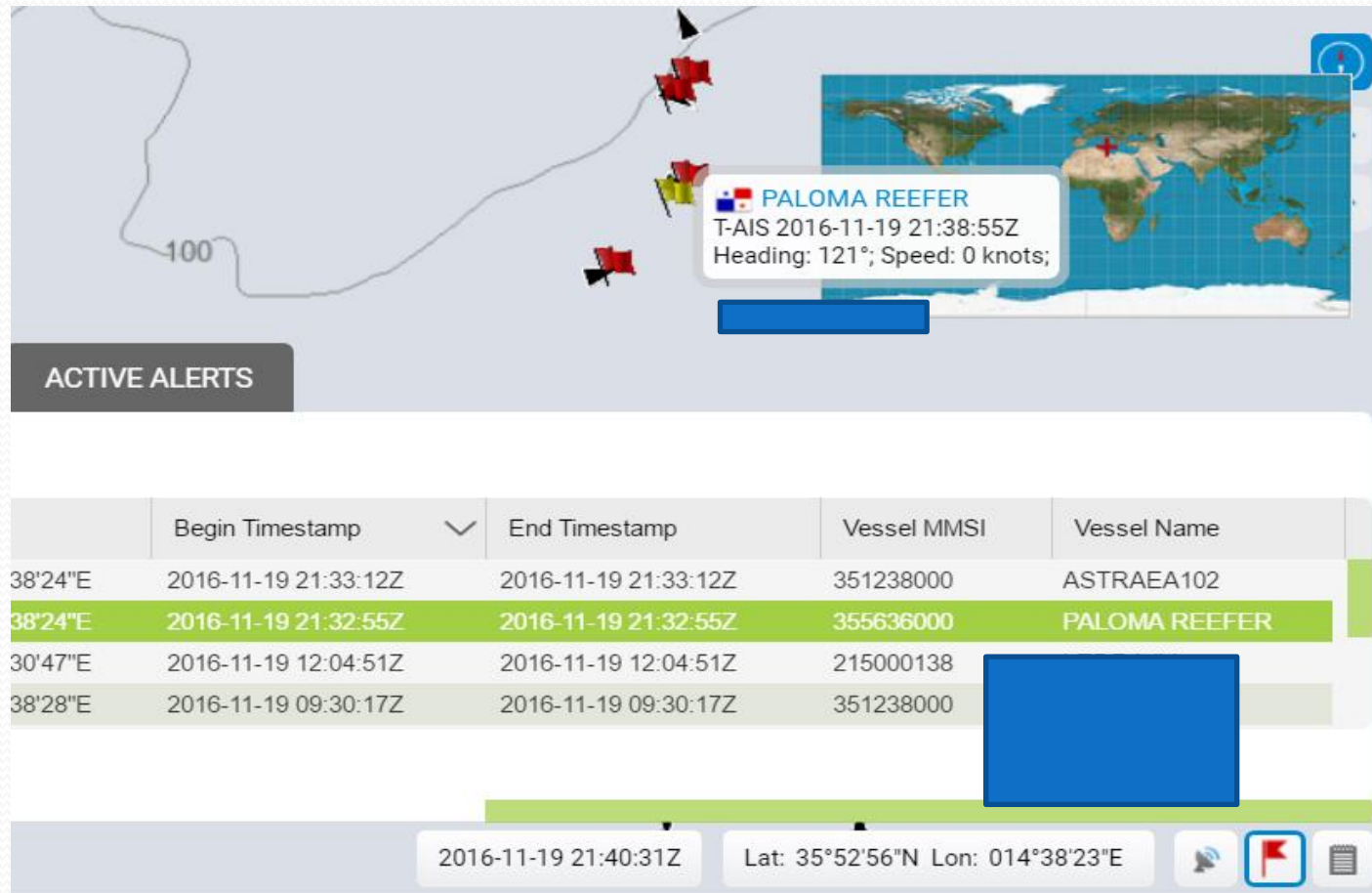
Encounter at sea cont...



The support vessel was inspected by Fisheries Officers when it returned and the master was questioned why he was alongside XXXX which was a towing live tuna

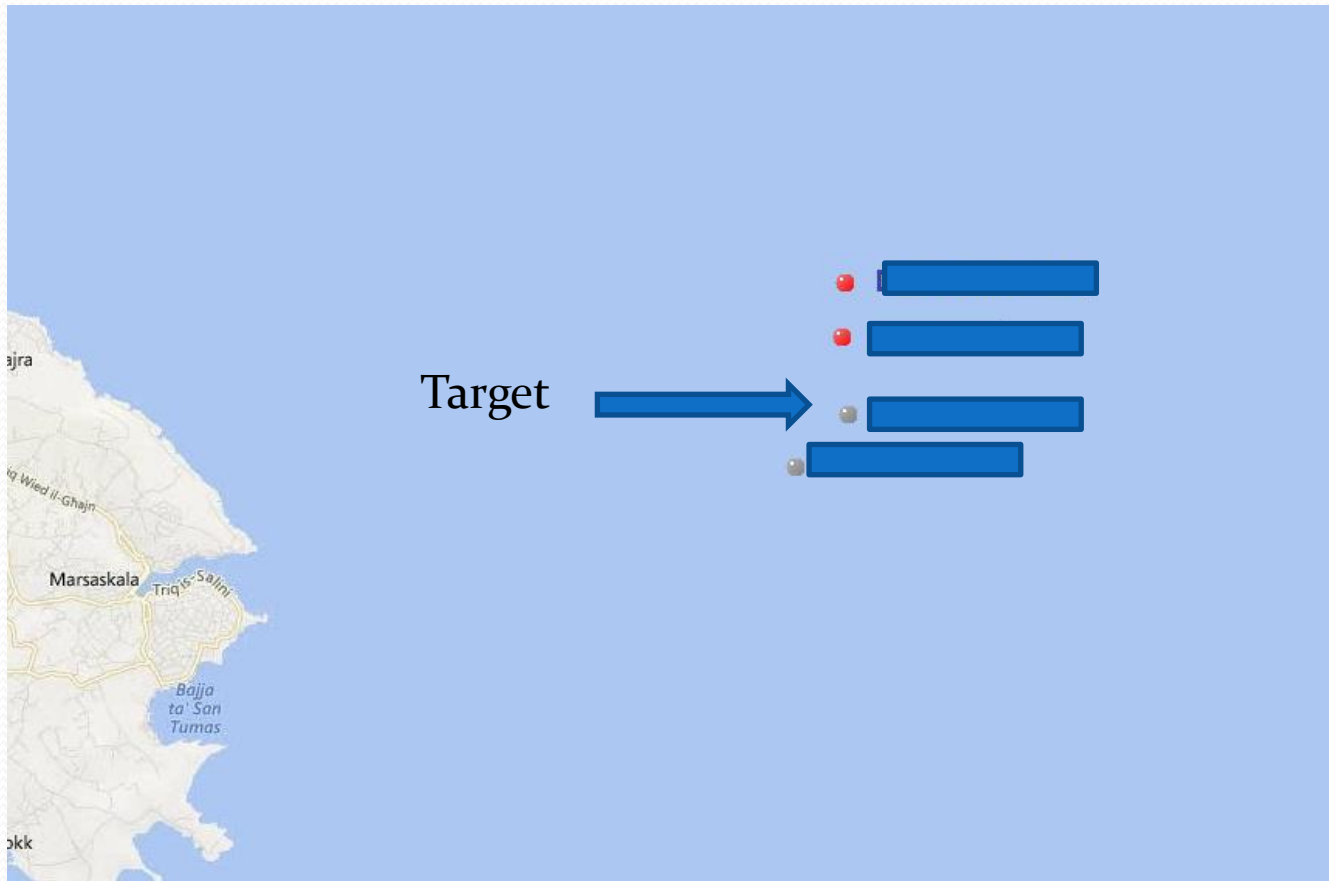
ABM SCENARIO 3

In Area cont...



ABM SCENARIO 3

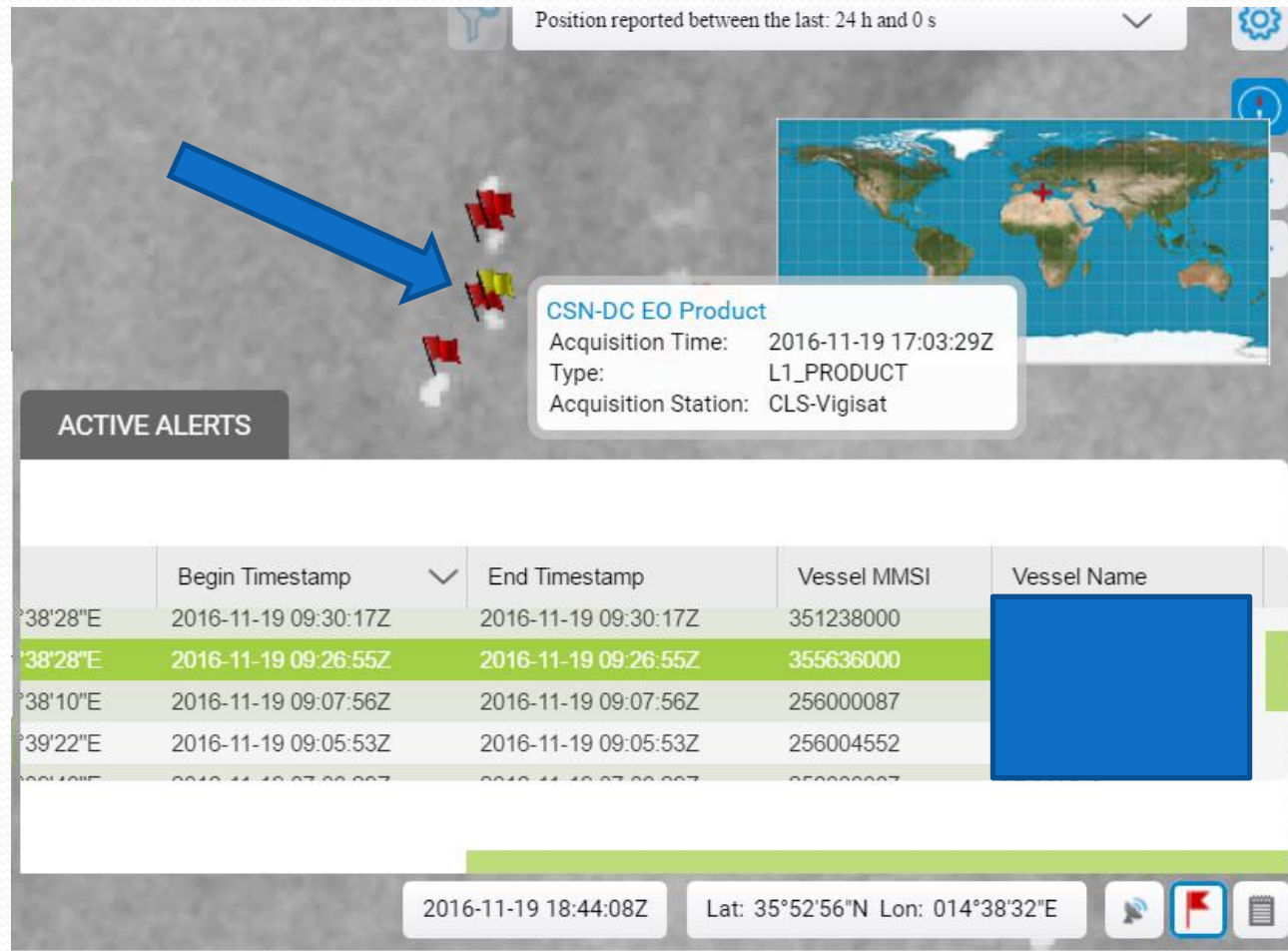
In Area cont...



VMS screen shot of 4 reefers (BFT) anchored nr farm

ABM SCENARIO 3

In Area cont...



Satellite image

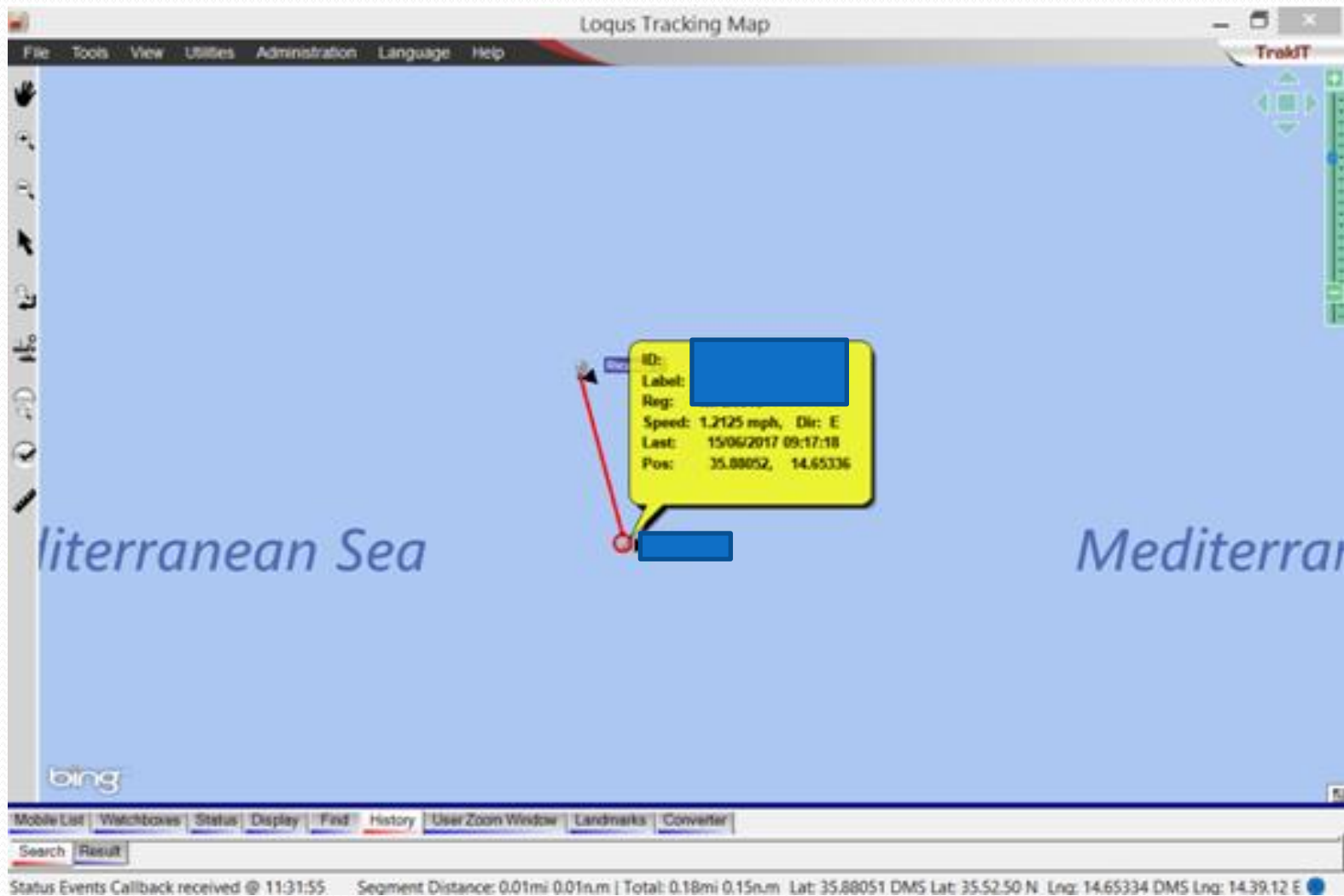
ABM SCENARIO 3

In Area cont...



Physical sighting

ABM SCENARIO 4 - Encounter at sea



VMS screen shot showing two BFT auxiliary vessels near one another

ABM SCENARIO 4 - Encounter at sea

EMSA IMIDatE - Alert Report

Surveillance Instance

Name:BFT 3

Description:Towing vessel 2

Area of Interest:Polygon32

Alert policy:at_each_occurrence

Alert type:AtSeaEncounter

Surveillance Instance Parameters:

Param name	Param value
maxDistanceThresholdInMeters	20
maxSpeedThresholdInMetersPerSecond	15
minDurationInSeconds	1000

Alert

ID:1497516679412

Cap Creation Time:2017-06-15T08:51:19Z

Sent:2017-06-15T08:51:19Z

Start Time:2017-06-15T08:30:50Z

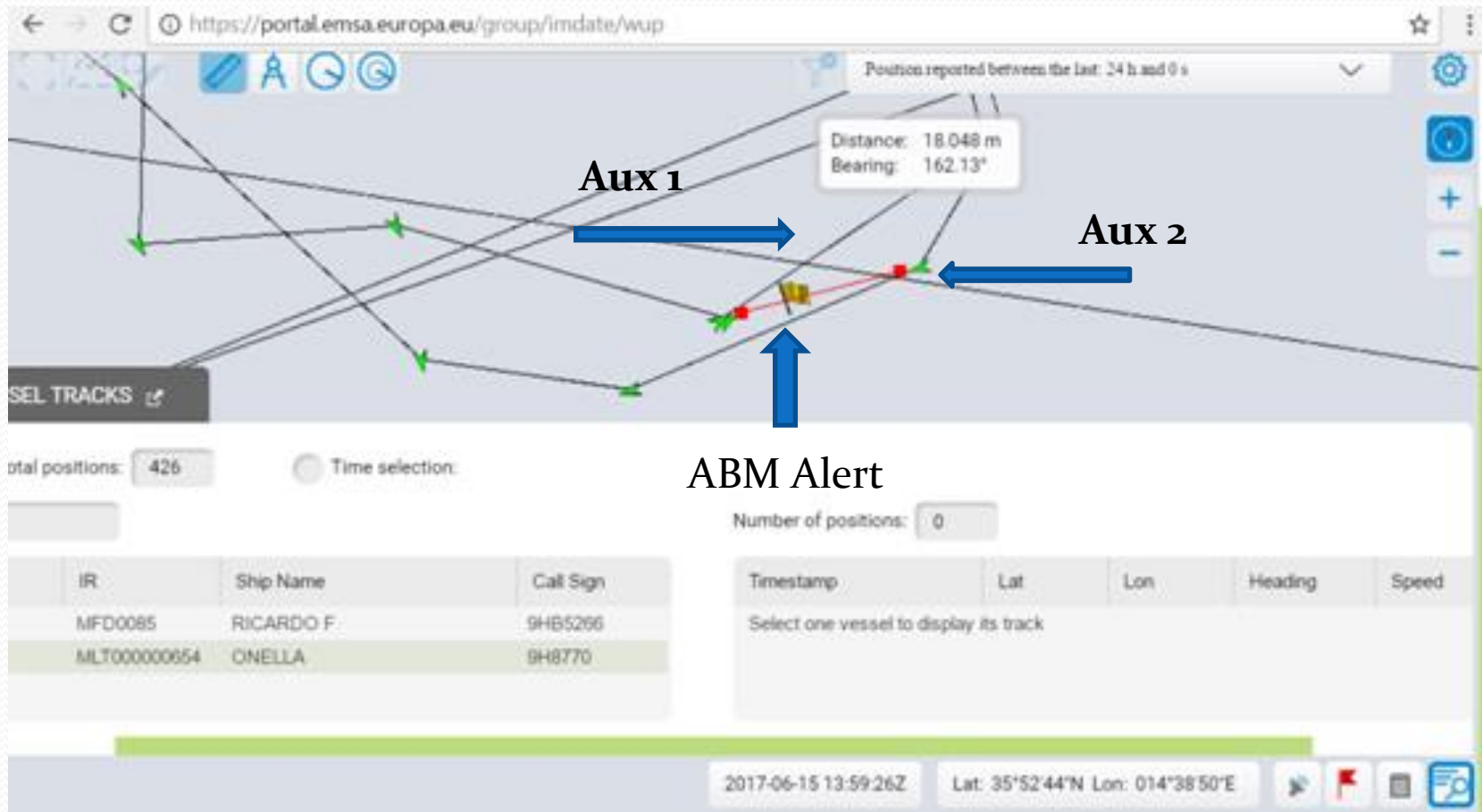
End Time:2017-06-15T08:39:48Z

Position Source:T-AIS

Latitude:35.88 (35 52'48.0"N)

Longitude:14.640 (14 38'50.4"E)

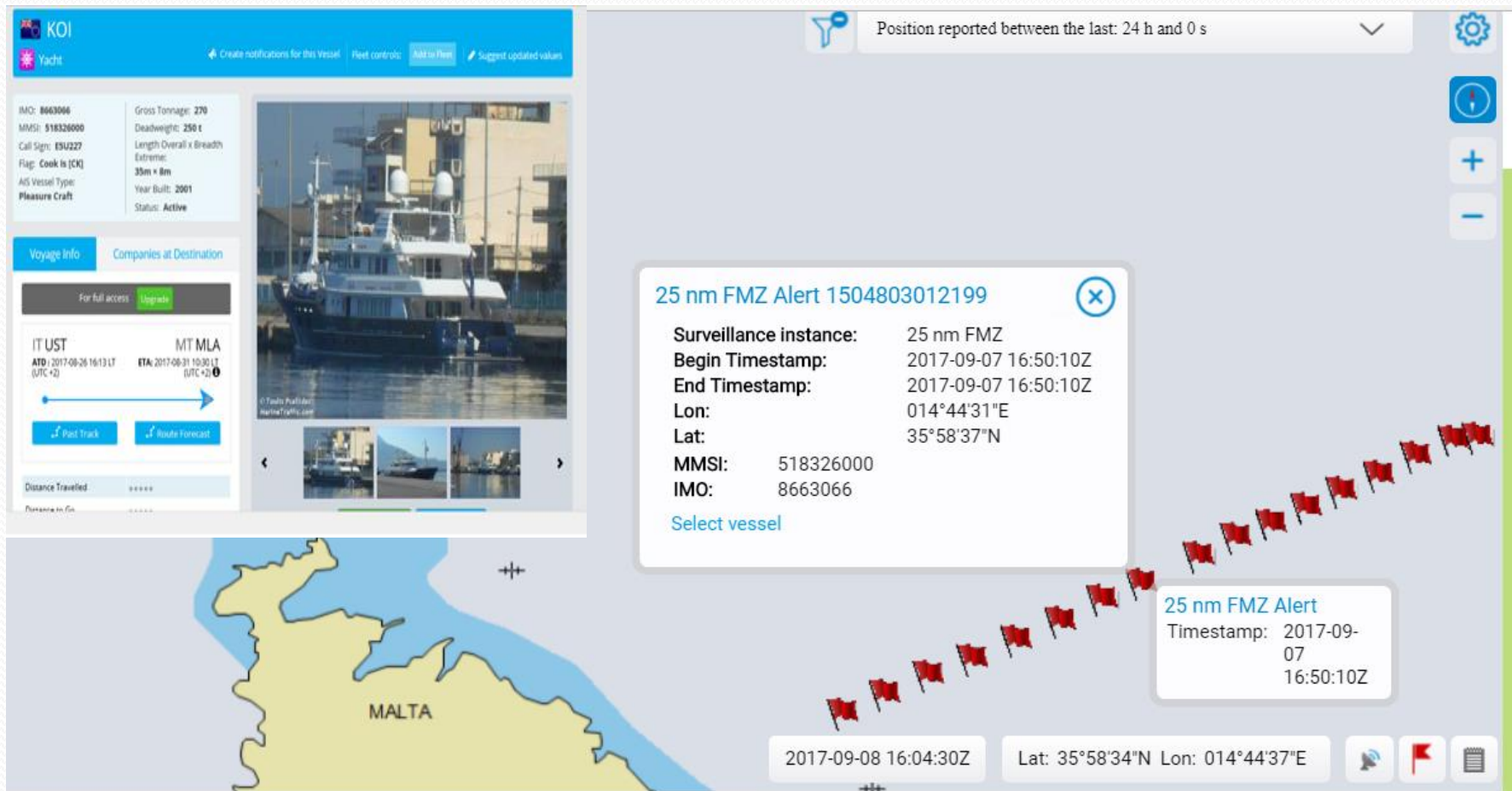
ABM SCENARIO 4 - Encounter at sea cont..



Even though this alert is set as an encounter at sea, both vessels passed one another, thus maybe the alert could also be used or named as an early “warning for collisions” to complement other collision warning systems either at FMC, Coast Guard or vessels.

Problems encountered with AIS

ABM – In area



- Unlike the Vessel Monitoring System (VMS) where Fisheries imputes a fishing vessel particulars in the terminal, such as name and registration.
- For AIS it is different as the owner of the vessel is responsible, so mistakes can happen.
- Also AIS terminals can be manipulated far more easily than VMS.

Thank you,
Questions?

