



European Maritime Safety Agency

Meeting minutes

Technical meeting on the assessment
of the "SSN-VMS synergies" pilot
project

Lisbon, 27 September 2012

Background

As a follow up to the Expert Working Group (EWG) meeting on the SSN/VMS pilot project (Rome, 11 October 2011), a meeting was held at EMSA in Lisbon on 27 September 2012 in order to assess the operational phase of the project (10 April – 10 October 2012).

The meeting was chaired by Lazaros Aichmalotidis, Head of Unit for Vessel Traffic & Reporting Services (EMSA), and he was assisted by Enrico Gironella and Edmunds Belinskis (EMSA). The meeting was attended by experts from the FMCs of Italy, Malta and Spain, as well as the SSN NCAs from Latvia (which also represented the Latvian FMC) and Norway. The EFCA representative Sven Tahon also attended the meeting.

As an amendment to the draft agenda distributed to the participants (attached to the note EMSA Ref. C.2_EGB_2012_046240 dated 28 August 2012), Marin Chintoan-Uta, Head of Unit for Satellite Based Monitoring Services (EMSA), gave a presentation on the "MARSURV-3/Blue Fin Tuna (BFT)" pilot project, and he was assisted by Mr Andrea Pellizzari (EMSA).

The amended agenda is attached at Annex 1 and the list of participants at Annex 2.

Meeting Objectives

The objectives of the meeting were to analyse and agree the evaluation report on the operational phase of the "SSN-VMS synergies" pilot project, and to discuss further steps. In addition, the purpose of the presentation on the "MARSURV-3/BFT" was to provide an overview of the other fisheries-related pilot projects currently being managed by EMSA, and to explore the possibilities associated with bringing together the projects.

Meeting Programme

1. Opening/introduction

The meeting was opened by Lazaros Aichmalotidis, who welcomed the participants and thanked them for the active participation and contributions during the pilot project, and in particular during the operational phase. He mentioned that this pilot project brings together both maritime safety and environmental interests within the fisheries sector. He recalled that the project will last until 10 October according to the agreed time plan. Thereafter, a final report will be generated to record the results of the project, including recommendations and proposals. The participants subsequently agreed the meeting agenda.

2. "SSN/VMS pilot project" operational phase

EMSA gave an overview of the pilot project objectives, the operational concept, the expected benefits and the actions performed.

The purpose is to demonstrate a concept that can provide benefits to the VMS system. Fishing vessels will be monitored because they have been fitted with Class "A" AIS equipment in line with the time plan contained in Directive 2002/59/EC (as amended). AIS information should be used to cross-check the data available to FMCs, as stated in Council Regulation 1224/2009 (Art. 10).

The application developed within the pilot project ("VMS proxy") correlates VMS data with AIS and displays it on a graphical, web-based interface (SSN GI), which is made available to FMCs. In

addition, AIS reports collected by the SSN network are distributed to the relevant FMCs after being converted to NAF format.

FMC experts clarified the legal framework for VMS carriage. All European fishing vessels over 12 metres in length are equipped with a "blue box," while non-EU fishing vessels are requested to do so, but only under specific conditions.

Norway asked for clarification of the potential impact of distributing AIS messages to the relevant FMCs. Italy stated that the use of the SSN2VMS stream would have no impact at national level because the AIS data is fully converted into the NAF format.

Norway asked whether Sat-AIS data were being used within the project. EMSA said that Sat-AIS data were out of the scope of the pilot project, but that they may be included at a later stage.

Spain proposed modifying the SSN-GI to show different symbols for AIS and VMS positions when historic vessel tracks are displayed.

EMSA noted the importance of future EFCA involvement in the project.

The EWG **noted** the information provided.

3. Presentation of the preliminary findings

EMSA introduced the findings collected during the project assessment.

A general discussion on standardisation in VMS transmission took place. Standardisation is the key to the establishment of a reliable data exchange system and to the enforcement of an effective set of data quality/validation rules. The operational phase demonstrated that a common understanding of the following points should be further explored (such as the Https transmission mode - GET/POST).

The participants recognised that the combined use of AIS and VMS data can improve the monitoring capabilities of FMCs. By using the correlated VMS/AIS data, more specific and high rate information can be obtained. In addition, the pilot application supported the FMCs in implementing Art. 10 of Regulation 1224/2009/EU, which refers to the use of AIS data for cross-checking with VMS reports.

In general, participants appreciated having the ability to access the traffic image via the SSN web based graphical interface. Norway underlined that the SSN-GI seems like duplication to FMCs which have already implemented their graphical interface. However, the EFCA pointed out that not all FMCs are advanced enough to have such a tool at national level. The pilot project offers users the opportunity of having a basic interface with the ability to merge AIS and VMS data.

The SSN-GI can be used as a backup solution should (a) national VMS system(s) fail, as it will allow the retrieval of (at least) the AIS positions provided by SSN. However, Spain pointed out that the present SSN-GI could not be a full replacement in cases of total failure of VMS systems. In order to do this, it would be necessary to upload restricted fishing areas to the SSN GI.

Malta pointed out that, according to the legal requirements, AIS is only for vessels over 15 metres in length, and that shorter vessels would not be able to be monitored if a national system was down, (unless 12-15 metre vessels are fitted with AIS device). Malta also found the coverage of AIS stations to be very extensive, which is a plus in case of vessels with a VMS failure at sea. A possible drawback is that, when using AIS data, confidentiality is lost, as it can be obtained via the Internet.

It was also noted that providing VMS information to the SSN community for SAR purposes would be very useful, although this is not legally supported. The issue will be considered in the final report.

Italy noted that the application developed for the pilot project could improve fisheries monitoring capabilities in general. It also stressed the need to clarify the legal aspects, in order to make VMS messages available to the SSN authorities for SAR purposes. In addition, AIS could be effectively used to monitor the positions of commercial vessels (such as tugs) engaged in fisheries-related operations (e.g. within the Blue Fin Tuna campaign).

Malta pointed out that VMS data should be provided to those involved in SAR monitoring within a framework of specific procedures.

FMCs pointed out that AIS is the only available tool for monitoring 3rd country fishing vessels which are not equipped with VMS, and which operate within the coverage of AIS coastal stations. However, the Spanish FMC pointed out that there are other pilot projects, such as the Vessel Detection System (VDS), that would help FMCs to locate IUU fishing vessels.

The EFCA pointed out that the project enriches the classical monitoring capabilities of FMCs, in that the use of VMS data is the basic requirement, but that the maritime picture could be improved by using AIS data.

The EWG agreed with the results as presented, bearing in mind the constraints noted, and invited EMSA to update the document in accordance with the comments/proposals mentioned above.

4. Presentation of the MARSURV 3/Blue Fin Tuna project

EMSA introduced the MARSURV-3/BFT project (a brief description is attached in Annex 3). This pilot project is developing a new platform for data integration and visualisation which merges fishing vessel positioning data (from VMS and terrestrial AIS, and also from satellite AIS) in order to support the monitoring tasks carried out by the EFCA within the Blue Fin Tuna campaign. The project was developed using Version 1 of the EMSA Integrated Maritime Data Platform (IMDatE).

Two options for the future were discussed:

- EMSA could provide *ad-hoc* support for specific operations, or;
- EMSA could develop a permanent "VMS + Maritime Data" single platform for the fisheries sector.

Italy expressed interest in benefitting from both pilot projects, and agreed that they should be merged.

Mr Aichmalotidis noted that the two projects are complementary, and that synergies could arise if they were merged. This approach could generate a single service for the different fisheries users (FMCs or the EFCA) by setting up effective access rights.

The EWG agreed on the need to merge both projects because they are complementary in nature.

5. Feedback from Member States

EMSA described the feedback from the participating FMCs which was provided in accordance with the agreed monitoring methodology.

Latvia, Spain and Malta encountered some problems in visualising the SSN-GI. These related to the browser configuration, and a solution was provided by the EMSA Maritime Support Services. Spain suggested that the possibility of querying the database for retrieving information within a specific timeframe, and for a specific vessel, should be evaluated, as this might be more effective than integrating all of the information into the FMCs' servers.

Participants discussed the problems encountered when installing digital certificates between SSN and VMS systems. This step is necessary to ensure a high level of information security and data confidentiality, but there remain some on-going issues (Malta and Latvia). EMSA is working on this point to find a workaround solution.

The EWG noted that the SSN-GI is a user-friendly backup interface, and that additional functionalities which are more oriented to fisheries monitoring would be desirable (e.g. distinguishing between VMS and AIS positions using different symbols, uploading and generating alarms for restricted areas, performance of kinematics calculations and the introduction of alarm functions in cases where there is a mismatch between AIS and VMS position). In addition, the ability to run queries would be an asset.

The EFCA provided figures relating to fishing vessels which have to be equipped with AIS on the basis of their length:

- >24 mt: 3,129 (not later than 31 May 2012)
- 18<24 mt: 3,445 (not later than 31 May 2013)
- 15<18 mt: 2,265 (not later than 31 May 2014)

In addition, around 5,000 fishing vessels in the 12-15 metre range are presently fitted with only VMS.

Malta expressed its willingness to continue the pilot project, and its desire to see a final version of the application which includes the recommendations collected to date. It will try to include the AIS2NAF messages in its national system as soon as possible. Malta also feels that it is important that EMSA and/or the EFCA can further develop the project. In addition, merging the MARSURV-3/BFT and SSN/VMS projects would enable the fisheries community to have a very useful tool which could encourage more Member States to participate in the project.

Conclusions

The chairman concluded the meeting thanking the participants for their fruitful participation. The "pilot project evaluation report" was approved with some minor changes, and based on the comments received, EMSA will revise the report and distribute it to the participants for further comments.

Follow-up actions

The agreed follow up actions are:

- a) Although the operational phase of the pilot project will end on 10th October, the data exchange from/to SSN will be maintained until further notice.
 - b) Additional FMCs willing to participate in the data exchange from/to SSN are welcome to do so, and if they wish, FMCs can increase the number of participating vessels. To do this, they should provide EMSA with a list of the additional vessels.
 - c) If the project is going to continue, EMSA, in cooperation with EFCA and the MSs, will assess the technical feasibility of improving the application with additional functionalities, such as the following:
 - The ability for the vessel track to show different symbols for AIS and VMS positions.
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- The possibility of uploading restricted areas and triggering alerts whenever fishing vessels cross the boundaries.
 - The possibility to perform queries on previous positions within specified time frames.
 - The amendment of the "VMS proxy" in order to be fully compliant with Regulation 404/2011/EU (e.g.: "IR" field to be adjusted etc.).
 - The ability of the SSN-GI to perform kinematics calculations.
 - The display of static and dynamic data on vessel tracks when hovering the pointer on the target (e.g. name, speed, direction, position).
 - The inclusion of alarm functions in the SSN-GI to bring attention to mismatches between AIS and VMS positions.
- d) A further discussion between EMSA and the EFCA should take place to assess the possibility of merging the "SSN-VMS" and "MARSURV-3" projects in a single platform.
- e) EMSA will disseminate the results of the pilot project to the participating MSs and the EFCA. The SSN HLSG will be informed of the results achieved and the possible further steps.

Annex 1: Agenda

Annex 2: List of participants

Annex 3: Overview of the MARSURV-3/BFT project

Annex 1**Provisional Agenda****Technical meeting on the assessment of the pilot project on SSN/VMS Synergies****Lisbon, 27th September 2012**

09:00 – 09:30	Registration	All
09:30 – 10:00	I. Introduction Opening/Welcome to participants Approval of the agenda	EMSA All
10:00 - 11:00	II. “SSN/VMS pilot project” operational phase Background information (legal, operational, technical, administrative) Project monitoring and assessment methodology	EMSA
11:00 – 11:15	Coffee break	
11:15 – 12:30	III. Presentation of the preliminary findings Analysis of questionnaires (technical, operational)	EMSA
12:30 – 14:00	Lunch	
14:00 – 14:30	IV. Visit to MSS	All
14:30 – 15:15	V. Presentation on MARSURV3/BFT	EMSA
15:15 – 15:30	Coffee break	
15:30 – 16:30	VI. Feedback from Member States (VTMIS and FMC)	ES, IT, LV, MT
16:30 – 17:00	VII. Follow up actions	All
17:00 – 17:30	VIII. Discussion/conclusions	All
17:30	End of the meeting	

Annex 3

Overview of the Pilot Project

MARSURV-3/Blue Fin Tuna

The MARSURV-3/Blue Fin Tuna (BFT) pilot project is a cooperation of EMSA and EFCA and has been executed from May to September 2012.

The MARSURV-3/BFT Pilot Project provides EFCA operators with a web application to:

- a. obtain a real time maritime awareness operational picture (data fusion of the different positions data sets, establishing a vessel register with common identifiers for fishery vessel);
- b. allow a centralised and quick access to a wide selection of maritime information;
- c. facilitate crosschecking and correlation between VMS, AIS and visual sightings;
- d. support behaviour analysis, risk assessment and classification of possible non-compliance;
- e. perform fishing activity assessment and follow-up;
- f. investigate the utility of a general behaviour surveillance tool for fisheries control operations by testing the possibility to detect non corresponding data sets, the capacity to detect specific targets and to discriminate them.

MARSURV-3/BFT shows a dynamic image of fishing vessel movements in the areas over the Mediterranean Sea defined to be of interest by EFCA and in the frame of the Joint Deployment Plan (JDP) BFT.



Figure 1: MARSURV-3/BFT areas

The main data streams for MARSURV-3 are:

- the VMS data provided by EFCA
- vessel traffic monitoring and information system (VTMIS) data provided by EMSA (including SafeSeaNet, LRIT, and other sources)

The data is supplemented by additional information, such as satellite AIS (for demonstration purposes), which allows the tracking of AIS reporting vessels far from the coastline.

The last known position of vessels, based on VMS or other position reports, is displayed on an interface, as illustrated below:

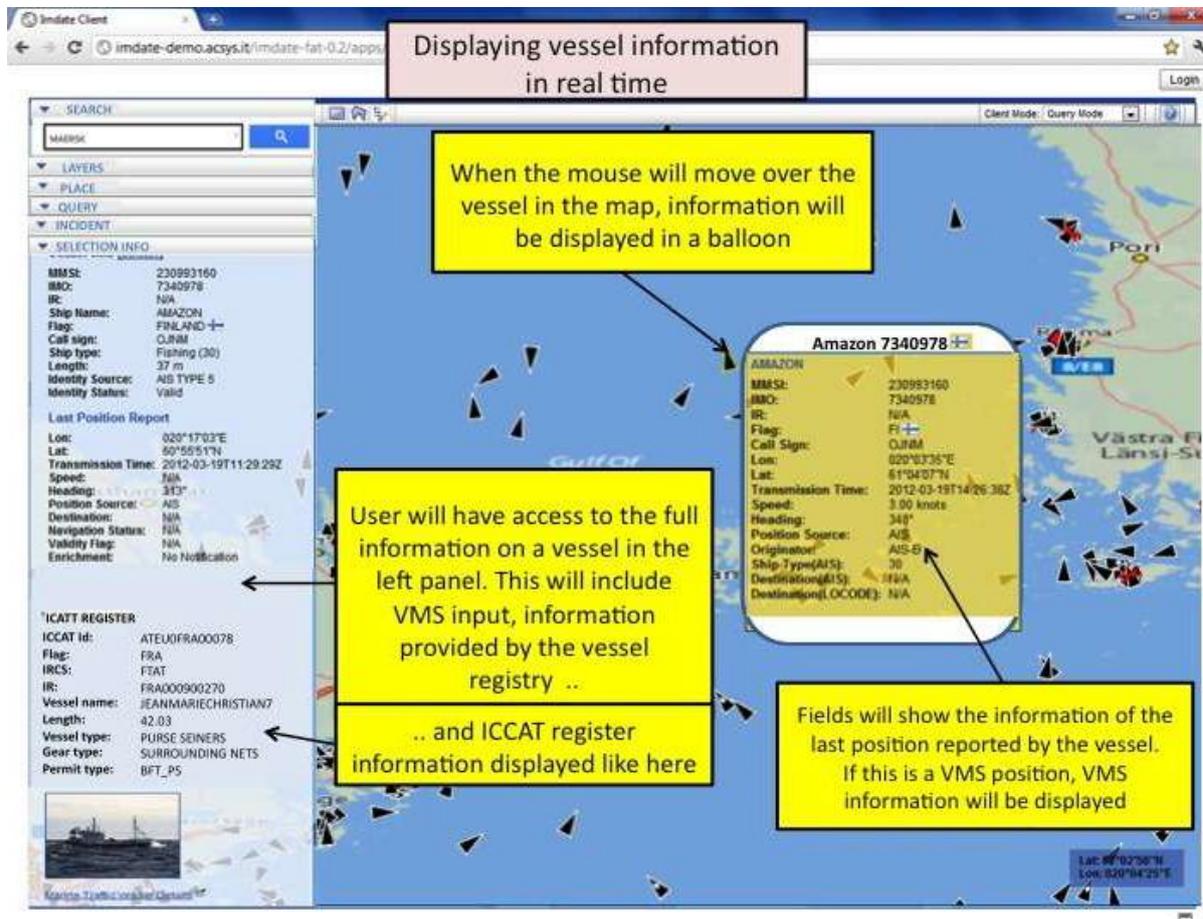


Figure 2: Mock-up of last position and ICCAT register display

By combining the different position reports, it is possible to ensure more accurate and reliable monitoring of vessel movements. The combined track is available as an optional feature on the map, as well as on the 'timeline' tool that provides a temporal overview of events.

During the surveillance and inspection activities, which are carried out by Member States in the framework of the JDP BFT, fishing vessel activity is observed and visual sighting information is collected. This information is regularly updated by EFCA through a dedicated web interface.

The visual sightings are displayed in the MARSURV-3 integrated picture as an extra layer. Additional layers can be integrated in the MARSURV-3 picture in order to allow EFCA to have user tailored visualisation for a proper monitoring of fishery activities, for example:

- Overall area of interest for the BFT campaign.
- Specific zones of interest for the BFT campaign.
- The position of fish farms, corresponding to the list provided by EFCA.