



**Meeting Minutes**

**3<sup>rd</sup> IMDatE user  
consultation meeting**

**8 November 2013**

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# 3<sup>rd</sup> Integrated Maritime Data Environment (IMDatE) User Consultation Meeting

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## Chairman welcome and opening

*Leendert Bal, Head of Department C: Operations, EMSA*

EMSA opened the meeting by welcoming all delegates. The willingness of both member states and EU bodies to share experiences was recognised and appreciated. Only through such an exchange of information can the IMDatE services reach their full potential for adding operational value.

The two main drivers behind IMDatE were explained: 1) the growing awareness at policy level of the need to fuse data; 2) the various pieces of legislation which prompted links between different data streams.

The agenda of the meeting was outlined, and the meeting participants were informed that the report of the meeting would be presented at the High Level Steering Group, to take place on 16 January 2014 (TBC).

## Update and overview of IMDatE project

*Marin Chintoan-Uta, Head of Unit C3: Satellite based monitoring services*

The presentation on the update and overview of the IMDatE project reminded participants of the process leading up to the initiation of the project. Moving the EMSA IT systems in-house in 2010 prompted the realisation that there would be the need for harmonisation between the systems, not only to improve the services offered to outside users, but also to facilitate the management of the systems internally.

The progress over the period 2010-2013 was reviewed, from kick-off, through to pilot projects, and the 'go-live' in March 2013. It was explained that the final deliverables for the main development phase of the platform are expected by the end of 2013, when the existing contract ends, and the final version will be in place in early 2014. This version will be made available for operational use on a voluntary basis.

The meeting participants were reminded that some activities fall explicitly outside the scope of IMDatE; there is no intention to replicate existing specialized capabilities, such as ordering of satellite images, billing of the Long Range Identification and Tracking (LRIT) Data Centre, SafeSeaNet PortPlus exchange, etc.

An overview was provided of plans for 2014. Once the development phase is complete, Member State users of the existing systems (SafeSeaNet, LRIT, CleanSeaNet) will be able to choose whether they wish to continue receiving individual services separately, or one integrated service.

## Introduction to Member States Pilot Service

*Samy Djavidnia, Project Officer, Unit C.3.1: Integrated Maritime Services*

In relation to the pilot service established for interested volunteer Members States (currently nine: France, Germany, Ireland, Italy, Portugal, Malta, the Netherlands, Spain and the United Kingdom), an overview was given of activities over the period since March 2013.

The presentation covered the following points:

1. Users and organisations
2. One single screen
3. Integrated ship tracking

4. Satellite AIS data stream
5. Member state specific tracking data
6. Sharing of data
7. System-to-system interfaces
8. Automated behaviour monitoring
9. Overlay of custom layers

The presentation illustrated the way in which Member States bring specific data types into the system for fulfilling their operational requirements, and emphasized that the system can handle all relevant access rights and distribution policies as requested.

## IMDatE demonstration

*Justino de Sousa, Senior Project Officer, Unit C.3.1: Integrated Maritime Services*

A live demonstration was given of the IMDatE service, covering the services established for EU bodies and member state pilot project volunteers. This went through the functionalities of the system, showing meeting participants how the features can be used and displaying some of the additional data provided by the member state pilot project volunteers. All participants, including those who do not currently use the system, were able to obtain a clearer overview of how it works, and can be tailored according to user needs and to the data sources available.

## Discussion

Following the live demonstration, there were a number of questions, revealing a high level of interest from participants.

Poland asked about medium-term plans for continuing with services to member states following the termination of the initial phase of the pilot project at the end of 2013, and whether IMDatE would be included in the revised Directive 2002/59/EC establishing a Community vessel traffic monitoring and information system (VTMIS Directive). A question was also posed regarding whether or not there is a specific format foreseen for the system-to-system interface.

The Commission responded with regard to the revision of VTMIS Directive, explaining that consultations have been taking place for the revision of the Directive, and the Impact Assessment is still on-going. Once the process is complete, the various policy options will be assessed.

EMSA explained that while revisions to the legislation are pending, use of IMDatE remains entirely voluntary. This also has implications in terms of ease of access to data. There may be restrictions depending on the data type in question, and at the moment the process for requesting access to some types of data can be quite time-consuming. Hopefully, with the revision of the relevant legislation, this process will become easier.

However, it was emphasized that EMSA only allows access to data under defined conditions, and that these are based on the rules given by the relevant National Competent Authorities (NCA). This follows a bottom up approach, where the notion of 'functions' rather than 'user communities' is used. The example was given of CleanSeaNet data, which, depending on the competent authority in the member state in question, may be provided to an environmental institute, the navy, the coast guard, or the maritime authority. The service is

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delivered to whoever is responsible for the function of pollution monitoring in the state, regardless of the organisation to which they belong.

With regard to system-to-system interfaces, it was explained that IMDatE is able to provide information in different formats and protocols. Whenever a request is received, EMSA will try to provide the data in whichever format is preferred by the user.

The United Kingdom representative explained that the greatest challenge in involving other UK counterparts in using IMDatE has been technical. IMDatE is supported on Chrome and Firefox, but not on Internet Explorer, which is more widely used in an institutional setting.

EMSA explained that the reason why IMDatE is available only on Chrome and Firefox is related to the limitations regarding the use of WebGL on Internet Explorer. Currently, the only way to resolve this is through using a plug-in.

Denmark asked whether IMDatE would be fully available via XML for the system-to-system interface.

EMSA confirmed that it would be, and that IMDatE can provide information in accordance with a range of different formats, depending on what the user prefers. Sometimes it may take a while to set up services due to the time it takes to install security certificates, etc. The team in EMSA is available to respond to any technical question, and willing to help in any way possible.

## Feedback on member state pilot services

Of the volunteer member states involved in the pilot project, Greece, Ireland, Italy, the Netherlands, and the United Kingdom, agreed to provide feedback by way of presentations. Malta, Spain and France also provided brief overviews of their experiences.

### Greece

*Maria Vafidou, Hellenic Coastguard*

Greece provided an overview of the elements which condition maritime activities in Greece.

The presentation addressed how Greece has been using the service for validating AIS data through other data sources, cross-checking SafeSeaNet and for extending the coverage of vessel tracking through the use of satellite AIS. Extensive use is made of the replay capability in relation to marine accidents and oil spills.

In terms of evolution of the IMDatE platform, Greece expressed a wish to receive additional SafeSeaNet information, information on expected port arrival and departure times, enhanced satellite AIS coverage, elimination of some of the system bugs, and the inclusion of a watchdog functionality.

### The Netherlands

*Ted van der Vleut, Netherlands Coast Guard (Kustwacht)*

The Netherlands presented the range of tasks currently being undertaken by the Coastguard, which span a wide range of maritime activities. The organisational structure of the Maritime Information Centre-NL was also introduced. The Netherlands presented three examples of how IMDatE has been used: to reconstruct

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events leading up to the collision of a guard vessel and a fishing vessel; to search for a missing buoy/waverider; and in a case of suspected drug trafficking.

The Netherlands outlined future expectations from the IMDatE system, which included a risk-based scoring of vessels; direct/automatic access to SafeSeaNet and CleanSeaNet.

## The United Kingdom

*Mark Harrington, Maritime and Coastguard Agency*

UK users find the interface effective and user friendly, and the map (after the initial slow loading) is quick to navigate and manipulate. It is now the tool of choice in the event of a CleanSeaNet report, and two examples of counter pollution operations were provided.

The main benefits of IMDatE at the moment for UK users are: that vessels can be tracked across a variety of position reporting systems in one programme; that CleanSeaNet pictures can be overlaid; that satellite AIS increases the level of domain awareness in comparison to the use of only LRIT; and that there is now one login rather than many.

The main features which would improve the service for the UK were as follows: inclusion of a bearing element to the measuring tool; UK meteorological feeds; access via Internet Explorer; and the establishment of a UK national alarm plan for vessel traffic monitoring, which might be addressed by automatic algorithms. The problem of chart zoom layers obscuring data was also mentioned, and it was stated that it would be useful for the start map to be set to the UK.

## Ireland

*Paul Ivory, Irish Coast Guard*

The Irish Coast Guard presented their operational experience with IMDatE, using the example of a medical evacuation. It was noted that IMDatE was extremely valuable in the context of Search and Rescue, but that there were some improvements to be made. It was observed that although the vessel could be tracked using IMDatE, the helicopter was not visible on IMDatE. Ireland queried whether it would be possible to add rescue assets to IMDatE.

In terms of the benefits, Ireland noted particularly the usefulness of: many applications provided via a single platform; and possibilities for long-range mission planning (increased safety of SAR assets, fuel savings due to better planning, more accurate timings for missions, improved quality service, improved decision support).

The problems noted in the use of IMDatE were the following: the login procedure can be cumbersome; the timeout feature is disruptive; the timestamp on some vessel positions was up to six hours old; using the tab key to sign in using Google Chrome is inconvenient.

In future, Ireland would appreciate support through IMDatE for: improved intelligence (on vessels of interest, and vessels carrying dangerous goods or high value cargoes); integration of VMS data and fishing zone layers; integration of information from the Irish Sailing Association Safetrx App; and tracking abandoned vessels. Information on meteorological and hydrographical data and on sea currents and integrating information from government apps were also suggested as possibilities.

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## Italy

*Antonio Vollero, Italian Coast Guard*

Italy provided three different examples of the operational use of IMDatE: during a SAR operation; investigating a CleanSeaNet alert; and monitoring the *Costa Concordia* parbuckling operation.

In addition to these specific examples, Italy also reported that in particular risk areas, IMDatE was extremely useful for monitoring Italian vessels which were not reporting LRIT (e.g. due to ship borne device technical problems). In this respect, the satellite AIS data stream was felt to be particularly valuable.

In terms of improvements in future, Italy had a number of suggestions: a 'watchdog' tool would be useful; it should be possible to create an 'event of interest' directly on the web interface; the Area Centric Query should have a choice between vessel positions, or the full vessel track visualisation; shape file formats (e.g. satellite images) could be added as an external layer. Italy also noted that Italian users would be interested in receiving a satellite AIS data stream using a system-to-system interface.

## Malta

*Pierre Zammit Endrich, Transport Malta – Merchant Shipping*

As the latest addition to the group of member state pilot project volunteers, Malta noted that there was not yet much feedback from operations, but that they were happy to share experiences to date. The IMDatE platform had been shared with three different entities: the transport authority, the fisheries authority, and the Coast Guard. In October, IMDatE was used twice to assist in SAR operations related to cases of illegal immigration. For merchant shipping, the system is very useful for monitoring vessels, particularly through the provision of satellite AIS when there has been a breakdown in LRIT equipment. For fisheries, it is anticipated that correlating VMS data with both terrestrial and satellite AIS will be useful.

## Spain

*Presented on behalf of SASEMAR (Salvamento Marítimo/Spanish Maritime Safety Agency) by EMSA*

Search and Rescue is the area where IMDatE represents the largest step forward in SASEMAR's operations, and it is also felt to be useful for marine pollution monitoring. An example was given of a recent SAR operation where 7 crewmen from a sinking fishing vessel were rescued. At present, SASEMAR does not find that IMDatE provides advantages over the integrated vessel traffic service (VTS) system currently being used. However, more time is needed to carry out further testing.

SASEMAR looks forward to the inclusion of additional SAT-AIS data and of the Automated Behaviour Monitoring tools. The main new feature of interest is the Search and Rescue Surface Picture (SAR SURPIC) function, integrating all position sources, including fishing fleet VMS.

## France

*Presented on behalf of Direction des Affaires Maritimes by EMSA*

The general feedback from France is positive. IMDATE is currently used by two VTS centres (Jobourg and Gris-Nez). The main asset of the system is the aggregation of data from different sources. One current drawback of the system is that the interface is sometimes slow.

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France expressed interest in receiving the IMDatE services delivered to France's national system – via system-to-system web services. In future, it was felt that the following developments would be useful: additional integration with SafeSeaNet (Sitreps, Polreps, and cargo information) and THETIS (Ship Risk Level); availability of met-ocean data; further customisation of the map; capability to display on demand a speed vector on a ship track.

## Discussion

The Commission representative summarised the session by noting the general consensus among all pilot project participants of the benefits of data integration. The users of IMDatE have found it useful in a range of different situations for fulfilling different functions. There is a growing expectation that IMDatE will provide advanced features and functionalities, and that this expectation of stakeholders is fully in line with the view of the Commission on the future of IMDatE and forthcoming policy planning.

The meeting participants were reminded that developments to date have occurred within a relatively short timeframe. IMDatE was merely a concept in 2010, and, although still in the development stage, in 2013 the system is already operational and providing initial services. All this has been achieved within EMSA's existing financial package, and in the scope of the existing Work Programme of the Agency.

## IMDatE operations for EU bodies

During the afternoon, presentations were given by the EU bodies currently using the IMDatE service: EFCA, EUNAVFOR and FRONTEX.

### European Fisheries Control Agency (EFCA)

*Sven Tahon, European Fisheries Control Agency*

Following the meeting of EFCA's Administrative Board in October 2013, the emphasis placed on the importance of using integrated data services and in the collaboration with EMSA has been reinforced. A technical working group will be set up with participation from the member state fisheries authorities, EFCA, EMSA and the Commission.

An overview was given of the operational use made of the system:

1. Real time monitoring and coordination of inspection activities, basic behaviour monitoring;
2. Detection and mapping of possible illegal, unreported and unregulated (IUU) fishing activity and transit monitoring;
3. Post-event analyses: risk assessment, planning and targeting, cross checking, performance analyses.

The main benefits of IMDatE services are as follows: real time automated correlation and cross checking; easy access to fishing vessel specific information; scope for improved vessel behaviour monitoring; enforcement of reporting requirements and business continuity; cross checking on validity of identifiers (spoofing); direct visualisation of inspection/sighting activity.

In terms of challenges for the future, EFCA presented the following points for consideration: layer quality and availability; up to date vessel identifiers and fishery related information; automation of behaviour monitoring; inclusion of other fisheries related data in view of future regulatory challenges; data storage

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capacity; more extensive use of vessel detection system (VDS) vessel reporting; and affordable Sat AIS availability.

Further functionalities and services which are likely to be required in the near future include: flexible alarm functionalities; ID inconsistency detection functionalities; user defined flexible symbols/colour coding; layer upload functionality; chart work functionalities; interconnection with other systems (electronic recording and reporting systems [ERS], environmental impact reports [EIR], etc.); and availability of secondary layer information.

## EU NAVFOR

*Simon Church, Industry Liaison Officer, the European Union Naval Force (EU NAVFOR) Somalia*

EUNAVFOR explained how IMDatE can be used to combine various maritime information streams with risk profile information related to vessels. The system can be used in time critical situations to identify vessels which need to be contacted, and to monitor the position of vessels held in captivity. Considerable use of integrated services is also made to look at 'patterns of life' time series.

## FRONTEX

*Piotr Malinowski, European Agency for the Management of Operational Cooperation at the External Borders of the Member States of the European Union (Frontex)*

FRONTEX is the most recent EU body to request maritime monitoring services from EMSA. The FRONTEX presentation introduced EUROSUR, the European Border Surveillance system. An overview was given of how Frontex uses, and will use, data fusion services, including the information provided by EMSA. EMSA will be the main provider of services to FRONTEX for internal security in the maritime domain. In 2014, EMSA services to Frontex will consist of data including AIS (satellite and terrestrial), LRIT, anomaly detections, correlation of different data sources, and synthetic aperture radar and optical satellite data. This will contribute to building an integrated situational picture at the European border.

## Summary Member State pilot services

*Samy Djavidnia, Project Officer, Unit C.3.1: Integrated Maritime Services*

The final presentation of the day provided an overview of the outcome of the member state pilot project experience to date, presented in three sections.

1. Outcome: the conclusions which can be drawn about the usefulness of each of the different features offered by IMDatE;
2. The overall user experience;
3. The new requirements which have been identified.

Credit was given to all member states for identifying and sharing in an open manner relevant maritime data with users of the Pilot Service. Special mention was made of those member states who, while not part of the pilot, agreed to share their national data: Latvia, Lithuania and Romania.

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## Conclusions

From the discussions around these issues, a number of conclusions have been drawn:

- a. Phase I of the member state Pilot Service has been a test-bed to explore and develop a set of integrated maritime services responding to the needs of volunteer member states.
- b. Addresses issues linked to data sharing as well as the collaboration and outreach with other sectors within the member state organisations.
- c. The general feedback reported by the member states on this first period of usage of the system has been positive and there is willingness to continue.
- d. Of particular relevance is the availability of multiple data streams and their integration towards the provision of an up-to-date and complete maritime domain awareness picture.
- e. Users expect access to additional information and services, e.g.:
  - Link to SafeSeaNet enrichment and THETIS Port State Control information;
  - Automated Behaviour Monitoring algorithms;
  - System-to-system interfaces to national systems.
- f. Problems have been reported, mainly related to speed of Web User Portal and the reliability/consistency of the data.
- g. Targeted training sessions are important in order to make full use of all Pilot Service functionalities and features.

## Discussion

The meeting participants were informed that a draft report detailing the conclusions drawn from the pilot project would be sent to the nine participating member states.

Clarification was given on a couple of points: 1) satellite AIS information can sometimes be older than the equivalent LRIT information; it depends upon the number of satellites used to gather the information, and on the ground stations used. 2) Meteorological and oceanographic data is useful, but EMSA is not a repository of this information. If the member states use a particular meteorological information provider or would like to receive data from any particular provider, they should inform EMSA.

## Roundtable discussion on IMDatE and future provision of integrated services

*Leendert Bal, Head of Department C: Operations, EMSA*

France expressed support for the IMDatE project, noting that it can be useful in a variety of contexts. Sweden stated that the project had brought much to the maritime community, to the benefit of all users responsible for a range of different functions, and asked about the medium and long-term strategy for continuing with IMDatE.

EMSA responded that IMDatE is currently running version 0.5. The first full version will only be completed at the end of the year, and operational in early 2014. It is intended that in the second quarter of 2014 there will be a User Meeting to collect feedback on version 1. At that point, further enhancements and improvements can be discussed.

## Summary and conclusions

*Leendert Bal, Head of Department C: Operations, EMSA*

The information presented at the meeting, and the subsequent report, will be presented to the SafeSeaNet High Level Steering Group in mid-January. In February, a meeting will also be held with the European Space Agency on future developments within the Satellite-AIS programme.

The provision of integrated maritime services and further improvement of IMDatE platform will continue in 2014 to comply with the service requests received from EU NAVFOR, EFCA and FRONTEX under the governance of the bilateral agreements signed with EMSA.

The IMDatE platform will continue to be open also for the use of MSs based on the same voluntary approach as during 2013.

Thanks were given to the IMDatE team at EMSA and to the volunteer Member States, who tested the system and contributed to its development.

All material (presentations and reports) of the meeting are stored in the IMDatE Project Repository available on the EMSA FTP site.