

# Memo of the third informal consultation session of the Expert Group for Mutual Exchange and Deliveries of AIS & Data (IC EG AIS 3-2024)

## Introduction

- 0.1 The third informal consultation session of the Expert Group for Mutual Exchange and Deliveries of AIS & Data (IC EG AIS 3-2024) was held in Helsinki, Finland, on 16 April 2024.
- 0.2 The Session was attended by representatives of Denmark, EU, Finland, Germany, Latvia, Norway, Poland and Sweden, as well as Observers from the Northern Dimension Partnership on Transport and Logistics (NDPTL) and invited guests from the Baltic Sea e-Navigation project and the Mediterranean AIS Regional Exchange System (MAREΣ). The list of participants is contained in **Annex 1**.
- 0.3 The Session was welcomed by Ms. Elisa Mikkolainen from the Finnish Transport Infrastructure Agency.
- 0.4 The Session was chaired by the Chair of the Expert Group for Mutual Exchange and Deliveries of AIS & Data, Ms. Kaisu Heikonen, Finland.
- 0.5 Mr. Markus Helavuori, HELCOM Professional Secretary and Ms. Marta Ruiz, Associate Professional Secretary, acted as secretaries of the Session.

## Agenda Item 1 Adoption of the Agenda

- 1.1 The Session adopted the Agenda of the Session as contained in **document 1-1** and noted the annotated Agenda in **document 1-2**.

## Agenda Item 2 Matters arising from other HELCOM sessions

- 2.1 The Session took note of the results of the survey on HELCOM working structure as contained in **document 2-1**.
- 2.2 Noting that the restructuring did not affect WG Maritime or its sub-groups, no comments were provided for consideration by IC HOD 5-2024 in June 2024.
- 2.3 The Session took note of the Memos of IC MARITIME 2-2023, IC RESPONSE 4-2023, IC HOD 3-2023 and IC HOD 4-2023 and in particular matters related to EG AIS (**document 2-2**).
- 2.4 The Session recalled that IC EG AIS noted that a planned project to undertake a long-term risk analysis for oil and HNS spills in the Baltic Sea in accordance with BSAP action S31 may eventually request input from EG AIS. In this regard, the Session noted that the aim is to submit an application for funding to the DG ECHO call UCPM-2024-KAPP - Knowledge for Action in Prevention and Preparedness (PV), with the deadline 25 April 2024.
- 2.5 The Session took note of the follow up of the implementation of the BSAP action S4 as contained in **document 2-3**.
- 2.6 The Session took note that no proposals on how to further advance on the implementation of this action have been provided to the Session.
- 2.7 The Session took note that following discussions at IC AIS EWG 2-2023 on a draft Danish proposal of list of priorities on e-navigation services in relation to the implementation of BSAP action S4 ([document 3-5 Rev. 1](#) and [Memo of IC AIS EWG 2-2023](#), para. 3.9-3-12), IC SAFE NAV 2-2023 considered the proposal ([document 2-3](#)), in particular, in connection with particular data sets that should be mentioned due to their relevance for navigational safety and route optimization (saving fuel and decreasing GHG emissions) and provided the following input ([Memo of IC SAFE NAV 2-2023](#), para. 2.13-2.14):
- the Baltic Sea e-Nav project funded by Interreg Baltic Sea Region will commence in November 2023 and is expected to be able to support this activity;

- the purpose of the draft document on prioritized e-navigation services is still a bit unclear, in particular regarding whether it is supposed to establish new requirements for the Baltic Sea; and
- the Baltic Sea is in the forefront of developing and using new technologies including e-navigation services, and identifying priorities in this regard may be useful also for other regions.

2.8 The Session took note that subsequently, IC MARITIME 2-2023 took note of the proposal ([document 9-2](#)) and provided the following views, inviting IC EG AIS 3-2024 to consider them when further advancing on this matter ([Memo of IC MARITIME 2-2023](#), para. 9.11-9.12):

- Germany supports the proposal in general, but notes that the focus is on the technical realization rather than regulatory matters. Transmission of media are considered in codes S124 and S412, currently being updated by an IMO Correspondence Group with which it would be useful to establish links;
- the Danish Maritime Authority has pointed out that contrary to what is stated in paragraph 2.14 of the memo of IC SAFE NAV 2-2023, the e-Nav project is not expected to fully lead to achieving action S4. Also, significant work and resources are expected to be needed on the national level (c.f. details in connection with action S4 in document 3-5 Rev.1); and
- Sweden supports the document and encourages further work, which Sweden will also contribute to. Also, Sweden noted that e-navigation services could be useful in assessing where ships clean cargo tanks and discharge tank wash waters.

2.9 The Session took note that no proposals related to the input provided by IC EG SAFE NAV 2-2023 and IC MARITIME 2-2023 have been provided to the Session. The Session, however, welcomed the useful input provided by IC EG SAFE NAV 2-2023 and IC MARITIME 2-2023 and recommended that it should be taken into account in future work related to BSAP action S4.

2.10 The Session took note that due to staff changes Sweden is not in a position to lead the benchmarking exercise agreed in relation to the BSAP action S4.

2.11 The Session discussed the way forward in implementing action S4 and welcomed the offer by Finland to lead the work in relation to benchmarking what is the current situation and what services are being used today, for consideration by the next session. The Session invited all other Contracting Parties to consider taking the lead on implementing the action from the next session onwards.

2.12 The Session took note that Norway is currently testing VDES base stations in western Norway outside Hugesund, including tests related to spoofing (c.f. Agenda Item 8 below). The Session noted that Norway will provide more information in due course.

2.13 The Session noted that Finland has three VDES base stations and that full testing has not yet commenced.

2.14 The Session noted that the Danish Maritime Authority has in the context of the [Interreg MaDaMe project](#) installed VDSF equipment onboard a number of ships, and will install VDES base stations in the Kattegat area. The Session noted that these will be tested on the Oslo-Copenhagen ferry, starting in 2025. The Session invited Denmark to provide more information about the testing to the next session.

2.15 The Session took note of information on the initiative to develop a Nordic+ Maritime ITS Strategy currently under the lead of ITS Norway and Fintraffic, aiming for improved synergies and harmonization of digitalization of the maritime sector (e-navigation services, Nautical publications, AtoNs, VDES, ship equipment standards, crew certificates, port clearance etc.). The coordinators are currently planning to organise an open online workshop on 24 May 2024 and dedicated sessions during the 2024 ITS World Congress in Dubai.

2.16 The Session took note of the work conducted by the Task Force to review HELCOM Recommendation 34E/2 (**document 2-4** and **Presentation 1**).

2.17 The Session noted that the current Recommendation 34E/2 focuses mainly on testing e-navigation services, while the intention is that the updated recommendation will shift the focus to the provision of identified services in a harmonized way (e.g. specific S-100 products and/or ASM messages). The Session encouraged interested parties to contact the task force leader [ulf.siwe@sjofartsverket.se](mailto:ulf.siwe@sjofartsverket.se) to contribute to the work.

### **Agenda Item 3 Recent national developments of AIS**

3.1 The Session took note of national information related to HELCOM AIS (including AIS coverage, monitoring of VDL loading, application of specific AIS messages and VHF Data Exchange (VDE), e-navigation, exchange of AIS information, AIS raw data buffering solutions and Class B AIS data) as follows:

- Denmark: There are long-term plans to update the AIS network. A tender will be issued for analysis and software modules, but the physical infrastructure and hardware will be brought back to the Danish Maritime Administration and no longer be managed by an external provider. Denmark is obliged to use a State provided IT system, which is secure but provides challenges to the AIS servers.
- Finland: There are no changes in the Finnish AIS network to report after the last meeting. As reported last time, Finnish national AIS network provider Fintraffic VTS has purchased 3 VDES Base Stations with R-Mode capability. Future testing will first focus on validation of AIS and VDES co-location issues. The VDE R-Mode tests are planned to be carried out in the ORMOBASS project. Fintraffic is partner in the MaDaMe project where also VDES communication capabilities are planned to be tested. Both projects have received Interreg BSR funding. Currently there is no buffering in the national AIS data interface (however this functionality is procured and will be included in the near future).
- Latvia: No changes since 2023. In relation to AIS coverage, Latvia has have eight base stations fully covering national waters, including EEZ. There is nothing to report in relation to monitoring of VDL loading, nor application of specific AIS messages and VHF Data Exchange (VDE) nor exchange of AIS information. AIS data is available only for authorized users. Finally, no buffering solutions for AIS raw data have been identified.
- Norway: No changes to the AIS network which was updated in 2015, but the AIS network is tied together with VTS services and JRCC (by virtual AIS) The JRCC has direct access to the AIS system and can send out virtual AIS for Search and Rescue operations. Norway is looking for ways of using the VDES stations together with AIS.
- Poland: No changes to the AIS network over the past four years, and also no changes planned for 2024-2025. Access to the national live AIS data stream is regulated by a decree of the Minister responsible for maritime affairs. Apart from the institutions listed in the aforementioned regulation, the Maritime Office does not grant permission for access to live AIS-PL data. Historical AIS data can be provided upon application and approval from the Maritime Authority.
- Sweden: Sweden has installed its first R60 AIS/VDES base station at Kaknästornet Stockholm (SAAB R60). VDES function will be added in the future. A project to replace all AIS base stations with VDES compatible stations in the Swedish AIS network is ongoing 2024-2027. A redundant proxy solution for streaming AIS data to and from HELCOM server has been updated. Buffer function in proxy, no other buffer functions in the system. Sweden is enabling 24/7 for MSI-management of virtual AIS via add on web interface, and developing a Saab interface. The Swedish Maritime Administration will replace AIS transponders on ship/boats to nr VDES compatible. A plan for exchange over the 3-4 coming years have been made. Two redundant database servers with archiving function (Installed in 2022).

3.2 The Session took note of considerations on data from AIS Class B and fishing vessels (**document 3-1 and Presentations 2 and 3**).

3.3 The Session discussed the proposal in document 3-1 to reassess the uses and users of HELCOM AIS data received from AIS class B vessels and AIS class A fishing vessels and the possible anonymization of this data.

3.4 The Session recommended that fisheries monitoring and control should be added to the uses and users of HELCOM AIS data in recommendation 33/1-Rev2 next time it is revised, as this recognized as a valid and important use of the data. Recognizing that revising the Recommendation requires approval also by WG Maritime, HOD and the Helsinki Commission (HELCOM), the Session recommended that the matter should be revisited at the next session and considered together with other possible changes to the Recommendation that may be needed based on the need for Class B and fishing vessel Class A data discussed below.

3.5 The Session recommended that it should be investigated if identification of individual information on AIS class B vessels and/or AIS class A fishing vessels is necessary, and if the real identity of AIS class B vessels and/or AIS class A fishing vessels is needed for all the intended use cases of HELCOM AIS data as defined in Recommendation 33/1- Rev2.

3.6 The Session invited the Secretariat to compile general statistics on fishing vessels (for both class A and B) to have an overview of ships' movements in the Baltic Sea, and to prepare a list of the known use cases of such data among HELCOM groups and projects, highlighting if real identities and identification of individual vessels is needed for those uses.

3.7 The Session further invited Contracting Parties and observers to provide information on the national uses and needs of such data to the Secretariat by **31 March 2025**, so that it can be compiled together with the information to be provided by the Secretariat and submitted to the next session for consideration.

3.8 The Session recommended that, based on information gathered, the next Session should consider investigating the possibilities to use anonymization techniques on HELCOM AIS data received from AIS class B vessels and from AIS class A fishing vessels to protect the fundamental rights and freedoms of natural persons and to respect the principle of data minimization.

3.9 The Session noted that the Secretariat could review the previous AIS data requests and their uses, in relation to AIS class B vessels and/or AIS class A fishing vessels. This information could be added to the known use cases of AIS data, as mentioned under paragraphs 3.6 and 3.7 above.

3.10 The Session took note that the Secretariat presented during a meeting of the ICES Working Group on Spatial Fisheries Data (WGSFD) the HELCOM AIS Regional Server and the AIS data products commonly produced by the Secretariat. The Session also took note that this ICES Working Group is working on defining how AIS data could be used to assess fishing activities, in comparison or coupled to VMS data.

#### **Agenda Item 4 Maintaining and further development of HELCOM AIS**

4.1 The Session took note of the information from Sweden on the use of AIS to determine a fishing vessels activity (**Presentation 4**), and the conclusion by Sweden that an AIS resolution of 1 minute or less is needed to be able to identify infringements in relation to fishing activities with a high confidence.

4.2 The Session noted that the current 6-minute resolution is not accurate enough for such work, and recognized also that there are other uses, such as risk assessments, where a resolution of 1 minute or less would be useful.

4.3 The Session took note of the information from EMSA that for using a higher AIS resolution, the impacts of this on the national systems of Member States and also the regional system would need to be assessed (e.g. are the national systems able to accommodate a 6-fold increase in data). The Session noted that an increased AIS resolution also has an impact on the data storage capacity of the HELCOM Secretariat.

4.4 The Session recommended that a higher AIS data resolution should be tested and invited the Norwegian Coastal Administration to prepare for such a test using a higher AIS data resolution (1 minute, and more frequent if possible). The Session noted the information from NCA that despite a higher frequency used, the NCA is able to provide individual (lower) resolution's data streams to countries in accordance with their wishes (e.g. 1 minute, or 6 minutes if so preferred).

4.5 The Session recommended that an informal online meeting is organized between the Norwegian Coastal Administration and AIS technical contacts from the other Contracting Parties on **14 May 2024 at 10:00 CEST** in order to plan the details of the testing. The Session invited the Secretariat to circulate an invitation to the AIS technical contacts for this informal online meeting. The Session further invited Contracting Parties to inform the Secretariat ([marta.ruiz@helcom.fi](mailto:marta.ruiz@helcom.fi)) of any additional participants to be invited by **30 April 2024**.

4.6 The Session invited Norway to consider informing Russia of the test in advance, or alternatively making arrangements to ensure that the test does not impact the AIS data from Russia.

4.7 The Session recalled considerations at IC AIS EWG 2-2023 on the services made available by Norway to retrieve national historical data and the discussion on whether this would be an interesting arrangement for HELCOM Contracting Parties, Contracting Parties are invited to report on their experiences testing the system with national data ([Memo of IC AIS EWG 2-2023](#), para. 5.2-5.9).

4.8 The Session took note of the information from Norway on the access of historical data (**Presentation 5**). The Session noted that Contracting Parties may request the NCA for access to the application with historical AIS data, once remaining issues have been solved. The Session invited Norway to update the next Session of developments in this regard.

#### **Agenda Item 5 Access to and use of HELCOM AIS information**

5.1 The Session took note of the information on the requests to access to and use of HELCOM AIS data from April 2023 to March 2024) as contained in **document 5-1**.

5.2 The Session took note that, in relation to the sharing of AIS data products via the [HELCOM Map and Data Service](#) (MADS) all data from 2006 to 2022 are available in MADS. The detailed data (per ship type) are available for download.

5.3 The Session recalled the discussions at IC EG AIS 2-2023 regarding Traffic Density Mapping service (TDMS) ([Memo of IC AIS EWG 2-2023](#), para. 6.5).

5.4 The Session took note of the information by EMSA on the progress related to Traffic Density Mapping Service (TDMS) as well as on issues regarding time synchronization (**Presentation 6**). The Session took note of a clarification that EMSA's shipping density Standard maps are publicly available while other maps will be available only for SafeSeaNet Ecosystem Graphical User Interface (SEG) users.

5.5 Recalling the discussions at IC EG AIS 2-2023 ([Memo of IC AIS EWG 2-2023](#), para. 6.6), the Session took note that issues related to time synchronization may occur e.g. when changing summer/winter time, when updating software or when new components or software are added. The Session noted that monitoring of AIS networks using national or regional monitoring tools or via SEG is an immediate solution while technical developments might be considered as the long term.

5.6 The Session recalled that, in relation to the sharing of AIS data products via the [HELCOM Map and Data Service](#) or via other platforms, IC AIS EWG 2-2023 took note that there was no additional information on the matter and that the Secretariat was hoping to share the polylines, but unfortunately due to time constraints and the fact that they are very heavy files, it had not been possible to further work on the matter.

5.7 The Session took note that there are no updates on this matter, but that the Secretariat has discussed that a project may be needed in order to advance on this matter.

#### **Agenda Item 6 AIS base stations by private companies**

6.1 The Session took note of the information on the use of AIS base stations by private companies (**document 6-1**). The Session considered the information provided by Denmark, Finland, Germany, Norway and Sweden as detailed in the annex of document 6-1. The Session noted inter alia that some countries see benefits in allowing private companies setting up AIS base stations, as that can fill gaps in coverage, while on the other hand, several Contracting Parties see risks in such activities.

6.2 The Session encouraged Contracting Parties to inform telecommunication authorities who grant permissions to AIS base stations of the risks associated with such private stations.

6.3 The Session welcomed the introduction of the Baltic Sea e-Nav project (2023-2026) - shared waters - same standards. Baltic partnership for future navigation (**Presentation 7**). The Session discussed e.g. how more advanced data in accordance with the S-100 standard will be transferred to ships at sea. The Session noted that the information would also be useful to share with IC EG SAFE NAV 3-2024 (online 2 September 2024).

#### **Agenda Item 7 Cooperation with other organizations**

7.1 The Session took note of an update on recent developments related to AIS and VDES standardization as contained in **document 7-1** and **Presentation 8**.

7.2 The Session took note of an update on the state of play of the Mediterranean AIS Regional Exchange System (MAREX) platform and its most recent improvements and experiences acquired by the ITCG on the AIS sharing as provided by the MAREX coordination team (**Presentation 9**).

7.3 The Session took note of the information from EMSA on the non-conformant MMSI in SEG (**Presentation 10**), including the development of new functionalities. The Session took note that some of these new functionalities may require actions from EU Member States (i.e. provision of additional AIS message types). Input on the use of this new functionalities can be provided to EMSA ([Lorena.AMIGO-LOPEZ@emsa.europa.eu](mailto:Lorena.AMIGO-LOPEZ@emsa.europa.eu) or [edmunds.belinskis@emsa.europa.eu](mailto:edmunds.belinskis@emsa.europa.eu)).

#### **Agenda Item 8 Any other business**

8.1 The Session took note that the list of official contacts for EG AIS can be easily accessed from the new [HELCOM Meeting Portal](#).

8.2 The Session took note that the lists of contacts for technical representatives and AIS agreements are not publicly available on the HELCOM Meeting Portal but are available upon request to the Secretariat ([Marta.Ruiz@helcom.fi](mailto:Marta.Ruiz@helcom.fi)). The Session further took note that both lists have been sent to the contacts by e-mail and invited the Session to provide the needed updates by **23 April 2024** to the Secretariat ([Marta.Ruiz@helcom.fi](mailto:Marta.Ruiz@helcom.fi)).

8.3 The Session recalled that IC AIS EWG 1-2022 discussed developments in relation to the possible use of the AISyRisk system of the Norwegian Coastal Administration (NCA) also by HELCOM Contracting Parties recalling the discussions at AIS EWG 32-2021 ([Outcome of AIS EWG 32-2021](#), para. 7.7-7.8). IC AIS EWG 1-2022 noted the confirmation by Norway that this would be technically feasible but would have implications on the AIS data frequency to be used.

8.4 The Session took note of the information on the AISyRISK Baltic tool and AIS data within the OpenRisk II as contained in **document 8-1**.

8.5 The Session considered the Openrisk II project request (document 8-1) to access to 20 second high resolution AIS data directly from Finland, Estonia, Lithuania, Latvia, Poland, Germany, Denmark and Sweden for the AISyRisk Baltic, recognized the importance of the project and the need for such AIS data.

8.6 The Session took note that the project requests data from 2023 (2024), 2022 and one more year with high ice cover will be defined at a later stage.

8.7 The Session invited contacts of EG AIS to liaise with their national representatives who are in a position to approve the request by the OpenRisk II project. The Session further invited Contracting Parties willing to share the 20s resolution data to provide them to Jon-Arve Ryset ([jon-arve.royset@kystverket.no](mailto:jon-arve.royset@kystverket.no)) by **31 May 2024**. The project will follow up with one-to-one communication with the national AIS EGs contacts.

8.8 The Session also recognized that new arrangements to enable transboundary access to 20s resolution AIS data from the region will be needed for the AISyRISK Baltic tool to work smoothly (without

data requests to individual countries) in the future. In this context, the Session recalled the discussion under Agenda Item 4 regarding the initiation of testing for higher resolution AIS data in the Baltic Sea.

8.9 The Session took note of information provided by Norway on AIS spoofing (**Presentation 11**).

8.10 The Session discussed storage of AIS data in cloud services, recognizing some countries have had security concerns in this regard. The Session noted that some countries currently store AIS data in cloud services (e.g. Azure) in other EU countries.

#### **Agenda Item 9 Future work and Workplan**

9.1 The Session welcomed the offer by the Denmark to host the next meeting online, tentatively on **20 May 2025**. The Session invited the Secretariat to confirm the date of the session in due course.

#### **Agenda Item 10 Memo of the Session**

11.1 The Session approved the draft Memo of IC EG AIS 3-2024. The final Memo, incorporating corrections by the Session, was prepared by the Secretariat in consultation with the Chair.



## Annex 1 List of participants

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