

Memo of the second informal consultation session of the Expert Group for Mutual Exchange and Deliveries of AIS & Data (IC EG AIS 2-2023)

Introduction

- 0.1 The second informal consultation session of the Expert Group for Mutual Exchange and Deliveries of AIS & Data (IC EG AIS 2-2023) was held online in Oslo, Norway, on 25 May 2023.
- 0.2 The Session was attended by representatives of Denmark, EU, Finland, Germany, Latvia, Norway, Poland and Sweden. The list of participants is contained in **Annex 1**.
- 0.3 The Session was welcomed by Ms. Malin Dreijer from the Norwegian Coastal Administration (NCA).
- 0.4 Ms. Marta Ruiz, Associate Professional Secretary, acted as secretary of the Session.

Agenda Item 1 Election of Chair

- 1.1 The Session recalled that Mr. Alar Siht, the Chair of IC AIS EGW, has retired, and that in the absence of a Chair of the Expert Group, Ms. Kaisu Heikonen, Finland, acted as Moderator of the last Session of the Expert Group.
- 1.2 The Session welcomed the proposal by Finland to Chair EG AIS.
- 1.3 The Session elected Ms. Kaisu Heikonen, Finland, as Chair of EG AIS for the period 2023-2025.

Agenda Item 2 Adoption of the Agenda

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

Agenda Item 3 Matters arising from other HELCOM sessions

- 3.1 The Session took note of the renewal of HELCOM working structure resulting from the conclusion of the renewal process as contained in **document 3-2**.
- 3.2 The Session took note of the launch of the new HELCOM Meeting Portal **document 3-3**.
- 3.3 The Session took note of the Memos of IC MARITIME 1-2022, IC RESPONSE 1-2022, IC RESPONSE 2-2022, IC RESPONSE 3-2023, IC HOD 1-2022, IC HOD 2-2022 and IC HELCOM 1-2023 and in particular matters related to EG AIS (**document 3-1**).
- 3.4 In particular, the Session noted that the feasibility study conducted by the HELCOM Response Working Group, in connection to the implementation of the BSAP action S31 to “Conduct a feasibility study by 2022 for, and as appropriate, undertake a risk analysis for oil and hazardous and noxious substances (HNS) pollution of the marine environment in the Baltic Sea area by 2025” has been approved by correspondence and work is ongoing to draft a project application on a long-term risk analysis for oil and HNS pollution in the Baltic Sea.
- 3.5 In this context, the Session noted that input from EG AIS may possibly be requested for the planned long-term risk analysis project.
- 3.6 The Session took note of the follow up of the implementation of the BSAP action S4 as contained in **document 3-4**.
- 3.7 When considering the implementation of the action, the Session exchanged the following views:
- on ways to promote and improve information on the use of VDES on board ships: a lot of testing is needed to have a perspective of what is the status in terms of available options. The Session invited

Contracted Parties to report on the testing conducted and its outputs to the next meeting of the Expert Group.

- on improving harmonization of the services provided in the Baltic Sea: the Session took note of a meeting recently held in Finland hosted by ITS Finland and ITS Norway to try to agree on projects that result in a common structure and specifications. The next meeting will be held in Tallinn in September 2023. It can be useful to try to find cooperation with ITS environments in different countries and ports. A project application to the next Interreg call could be an option to consider. It is important to find solutions in the Baltic Sea and between the Nordic countries so that harmonization is possible. A draft memo has been produced by ITS after the meeting and it will be circulated shortly. The next steps of the process are not completely clear, but work is to focus on data models including also those available from industry, not only the maritime ones.
- on improving the reliability connection between national AIS systems and the HELCOM AIS server e.g., buffering to be developed in all legacy systems: this information is being reported under Agenda Item 4 when information national activities is provided.

3.8 In relation to Swedish considerations in relation to the current status of the HELCOM AIS as well as VDES, the Session took note that Sweden will provide an update of this information to the next EG AIS meeting.

3.9 The Session took note of a draft Danish proposal of list of priorities on e-navigation services (**document 3-5**).

3.10 The Session welcomed the proposal and provided input as contained in **document 3-5 Rev. 1**. The Session invited Contracting Parties to provide input to this revised version to the Secretariat (marta.ruiz@helcom.fi) by **8 June 2023**. The Session invited the Secretariat to conduct an editorial revision of the document.

3.11 The Session recommended submitting the proposal to the next session of the Expert Group on Safety of Navigation for input in relation to topics under their experience.

3.12 The Session recommended submitting the proposal to the next session of the Maritime Working Group for consideration and provision of guidance on next steps.

3.13 The Session invited the Secretary to investigate how to share the work conducted in the frame of ITS.

Agenda Item 4 Recent national developments of AIS

4.1 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: daily AIS data for Danish waters is available in a dedicated [website](#). In relation to VDES and e-navigation systems, they are on the testing phase and have applied for an Interreg project application on this topic. A project proposal under the Danish Innovation Fund on Satellite VDAS test will also be submitted next week. There is not any specific national buffering solution.
- Finland: after the last session of AIS EWG, there has not been any changes in the Finnish national AIS network that would affect the network coverage. The VDL load is currently not monitored. There have been no recent developments related to transmission of ASM messages in Finland. As reported last time, Finnish national AIS network provider Fintraffic VTS has purchased three VDES Base Stations with R-Mode capability. Future testing will first focus on validation of AIS, ASM and VDE co-location issues and later transmission of selected ASM messages via ASM frequencies (e.g., real-time and forecasted hydro-meteo information). VDE R-Mode tests are planned to be carried out in the ORMObASS project (if funded) and VDES communication capabilities are planned to be tested in the MADAME project (if funded). Both projects are applying Interreg BSR funding. In Finland Class A information is open data (excluding fishing vessels), Class B data is currently not published. The buffering of data in the national AIS data interface is planned to be implemented, but the implementation schedule is not yet confirmed.

- Germany: there is no information to report at this stage.
- Latvia: in relation to AIS coverage, there are eight base stations fully covering national waters including EEZ. There is no monitoring of VDL loading, and nothing to report in relation to the application of specific AIS messages and VDE nor e-navigation. When it comes to exchange of AIS Information, AIS data is available only for authorized users. Finally, there is no buffering solutions.
- Norway: information is contained in **Presentation 1**.
- Poland: there is no information to report at this stage.
- Sweden: there is no information to report at this stage.

4.2 The Session took note of a presentation by Space Norway on VHF Data Exchange over Satellite (**Presentation 2**). The Session took note of the invitation by Space Norway for investigating options for cooperation.

Agenda Item 5 Maintaining and further development of HELCOM AIS

5.1 The Session recalled that HELCOM AIS EWG 30-2019 ([Outcome of HELCOM AIS EWG 30-2019](#), para. 3.6-3.7) and HELCOM AIS EWG 31-2020 ([Outcome of HELCOM AIS EWG 31-2020](#), para. 4.5) invited Contracting Parties to send information to the HELCOM Secretariat on the current status of AIS data buffering at the national level.

5.2 The Session recalled that AIS EWG 32-2021 took note of the information from Norway on the services made available by Norway to retrieve national historical data. Since the usual ftp service provides raw data in a format which is difficult to read (i.e. NMEA format), Norway wanted to hear if the countries from the Baltic Sea region were interested in such a solution. Based on feedback the NCA will consider to develop a tool as described ([Outcome of AIS EWG 32-2021](#), para. 4.2-4.3).

5.3 The Session recalled that IC AIS EWG 1-2022 took note of updated information provided by Norway ([Presentation 1](#)), including the plans to make such historical AIS data (from 2017 onwards) available to HELCOM Contracting Parties. Limited Norwegian terrestrial data is currently already available openly, but with a username and password HELCOM Contracting Parties could get access to detailed data in CSV format which is easier to use in various applications as compared to the raw AIS data currently available through HELCOM.

5.4 The Session recalled that IC AIS EWG 1-2022 concluded that it would be useful for HELCOM Contracting Parties to get access to data from the whole HELCOM area in CSV format through the Norwegian national system. The Session confirmed that the AIS data agreement in Recommendation 33/1 should apply also to such a new data sharing arrangement.

5.5 The Session recalled that IC AIS EWG 1-2022 noted that the next meeting should consider the possible need to revise Recommendation 33/1 to reflect this arrangement and invited the Secretariat to submit a proposal on the matter to the next meeting.

5.6 The Session considered the possible need to revise Recommendation 33/1 Rev.2 (**document 5-1**) and was of the view that the current text already covers this new data sharing arrangement since it specifies (Appendix 3, §2) that “The HELCOM AIS system consists of a network of national AIS base stations situated in the Baltic Sea Countries and Norway.”

5.7 The Session recommended that there is no need to revise Recommendation 33/1 Rev.2 to address this matter.

5.8 When considering how to set up the above-mentioned new data sharing arrangement, the Session took note of the proposal by Norway that each country would have access only to their own historical AIS national data.

5.9 The Session supported the Norwegian proposal as well as the testing of the system with national data. The Session invited Contracting Parties to report back on their experiences to the next meeting of the Expert Group.

5.10 The Session took note that access to the system can be granted shortly. For that purpose, an identification per country will be provided. The Session invited Contracting Parties to identify a contact

person who should receive such identification and inform Harald Åsheim (harald.aasheim@kystverket.no) accordingly by **mid-June 2023**.

5.11 The Session supported considering the access of data by a country from other countries to the next meeting of the Expert Group.

5.12 The Session took note that Finland and Sweden may explore the possibility of accessing respective national data. The Session invited Finland and Sweden to report back in relation to this matter to the next meeting of the Expert Group.

Agenda Item 6 Access to and use of HELCOM AIS information

6.1 The Session took note of the information on the requests to access to and use of HELCOM AIS data from May 2022 to April 2023 as contained in **document 6-1**.

6.2 The Session recalled that IC EWG AIS 1-2022 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 2020 were available in MADS. The detailed data (per ship type) were available for download.

6.3 The Session took note that the Secretariat found two daily files with erroneous NMEA sentences for 2022 and that the Secretariat liaised with the Finish Meteorological Institute to get the data for these two missing days. The Session took note that once the data is complete, the pre-processing and the production of shipping density maps will begin.

6.4 The Session took note that, in relation to the 2021 maps, there has been a technical issue and work is ongoing to sort it out. The Secretariat will update the scripts to produce shipping density maps. The update will cover issues with very heavy files and will make the process easier for users, and to update the scripts with new software now used by the Secretariat. The new scripts will be added shortly on GitHub depository to make the scripts publicly available, as it was done for the previous ones.

6.5 The Session took note of the update from EMSA that Traffic Density Mapping service (TDMS) became operational in September 2019. TDMs have been produced starting from January 2019, and made available to Member States and EU Institutions via the SEG application and to the public via the EMODnet portal. 612 Standard maps are calculated per year (432 monthly maps; 144 seasonal maps and 36 yearly maps). The service is developed gradually. TDMS phase-2 includes additional types of maps for specific areas: detailed maps (using 200x200 m cells), vector maps (displaying ships tracks) and comparative maps (allowing to compare values in two selected Standard maps). The maps calculation service is developed. Developments in SEG for the TDMs visualisation upon request were rearranged, and maps will be available through SEG in Q4 this year. TDMS phase-3 aims at upgrading the service and calculating new types of maps: customised maps (TDMs for users' defined periods), and TDMs for ranges of the ships characteristics (gross tonnage, keel date, fuel type, and RPM). The maps calculation is developed. Necessary developments in SEG were rearranged to 2024.

6.6 The Session took note that maps quality depends on AIS data quality and that some issues have been detected in relation to time synchronization, which mainly happens when there are updates in the national software or when it is a change to summer or winter time. There are discussions with the Norwegian Maritime Administration to introduce an automatic warning in this regard. The Session encouraged countries to find out a solution to ensure time synchronization.

6.7 The Session took note of the clarification that currently there are no plans to produce density maps for time periods before 2019.

6.8 The Session invited EMSA to demonstrate to the next meeting of the Expert Group their advances in relation to TDMS.

6.9 Following discussions by AIS EWG 32-2021 ([Outcome of AIS EWG 32-2021](#), para. 5.8), the Session recalled that MARITIME 21-2021 considered the draft revised Recommendation 33/1 to clarify in the form for a standard agreement on access to and use of HELCOM AIS data that the requestee of HELCOM AIS data is not allowed to share data with which it is possible to identify particular ships (Appendix 3 of HELCOM Recommendation 33/1) and approved the draft revised Recommendation 33/1 as contained in Annex 3 for submission to HOD 61-2021 for approval with a view to adoption by HELCOM 43-2022 ([Outcome of MARITIME 21-2021](#), para. 8.13-8.14 and Annex 3).

6.10 The Session took note that although HELCOM 43-2022 was postponed, the revised Recommendation 33/1 was adopted through correspondence procedure in August 2022 and is available in the HELCOM website as [HELCOM Recommendation 33/1-Rev.2](#).

6.11 The Session took note, in relation to the sharing of AIS data products via the [HELCOM Map and Data Service](#) or via other platforms, that there is no additional information on the matter. The Secretariat is still hoping to share the polylines but unfortunately due to time constraints and the fact that they are very heavy files, it has not been possible to further work on the matter. However, the intention is to conduct this work within 2023.

Agenda Item 7 AIS base stations by private companies

7.1 The Session recalled that AIS EWG 32-2021 took note of the information from Poland on private companies which are willing to establish AIS base stations and agreed to add this topic of discussion to the agenda of the next meeting of the HELCOM AIS EWG ([Outcome of AIS EWG 32-2021](#), para. 7.9).

7.2 The Session recalled that when considering the matter, IC AIS EWG 1-2022 took note of concerns expressed regarding the importance to configure AIS base stations correctly, taking IALA regulations into account, especially if a large number of such private AIS base stations are established.

7.3 The Session took note of the information by Poland that there is one platform in the Baltic Sea, located North-West Gulf of Gdansk which is owned by a private company. In Poland, there are plans to develop wind farms, and most of the private companies which want to build-up wind farms, want also to build up AIS base stations.

7.4 The Session took note of the following views on this matter:

- Norway: they have experience with exchange data with the oil industry. There is no permission request to build up an AIS base station.
- Denmark: there is cooperation ongoing with oil drilling companies in the North Sea. There are some concerns (e.g., band width, frequency) in relation to private companies wanting to send AIS messages about their activities in dense traffic areas, because navigational safety is to be prioritised.

7.5 The Session invited Contracting Parties to provide input to the next meeting of the Expert Group on the use of AIS base stations by private companies. In this regard the Session invited the Secretariat in cooperation with the Chair to prepare a template for countries to provide such input before the meeting.

Agenda Item 8 Cooperation with other organizations

8.1 The Session recalled that IC AIS EWG 1-2022 took note of recent developments at international level related to AIS and VDES standardization (document 7-1), recognizing the possible future need to agree on the controlling VDE base station service areas and Bulletin Board transmissions between adjacent countries in the Baltic Sea area. Comments and clarifications to this information, as well as on the use of VDES (document 7-2) were also taken note of. Finally, the Session noted that using VDES in place of AIS would require incorporating certain functions of AIS into VDES equipment and that this would be technically possible.

8.2 The Session took note of an update on recent developments related to AIS and VDES standardization as contained in **document 8.1** and **Presentation 3**.

8.3 The Session recalled that AIS EWG 31-2021 ([Outcome of AIS EWG 32-2021](#), para. 6.4) took note of the information from the Italian Coastguard on the Mediterranean AIS Regional server, discussed on the synchronisation of the mobile stations in the Mediterranean Sea area, and noted the relevance of sharing experience on regional servers and considered to have, if possible, such presentations in future meetings.

8.4 The Session took note of an update on the status of play and last improvements of the Mediterranean AIS Regional Exchange System as contained in **document 8-2**.

8.5 The Session recalled that IC AIS EWG 1-2022 noted information provided by EMSA, that the 18th Mediterranean AIS Expert Working Group (EWG) meeting was held remotely on 10 December 2021 with the objectives to: present the general activities and the progress achieved by MARES and other regional AIS

servers; update the group on the status of national AIS networks; and discuss technical issues related to AIS data exchange.

8.6 The Session recalled that IC AIS EWG 1-2022 further noted that a solution for the MARES stored (backlog) data retransmission through the proxy application backlog solution was implemented and tested with EMSA. This solution is for retransmitting backlog data to the central SSN system following the RS technical malfunctions. A new solution for AIS data (buffered or stored by national AIS systems) retransmission provided manually by the connected network's administrator to the regional AIS server was introduced. The proposed solution was presented also to the SafeSeaNet group (SSN/LRIT 9), and provided, as technical instruction, to the AIS Points of Contact in the MARES participating countries. Italy plans to test the solution with some EU Member States.

8.7 The Session took note of the information from EMSA that the 19th MARES EWG meeting took place in Rome, on 25 January 2023. The meeting objectives were to evaluate and discuss the general activities and progress achieved; to update the status information on the national AIS networks and discuss technical matters related to the AIS data exchange in MARES; to present the general activities and the progress achieved by MARES and other regional AIS servers.

Agenda Item 9 Any other business

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

9.2 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). 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 **8 June 2023** to the Secretariat (Marta.Ruiz@helcom.fi).

9.3 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 (6 minutes to 30 seconds) and that an agreement would have to be made between the NCA and HELCOM or its Contracting Parties in order to enable the use of AISyRisk system for HELCOM Contracting Parties.

9.4 The Session continued the discussion on the possible use of the AISyRisk system of the Norwegian Coastal Administration (NCA) also HELCOM Contracting Parties. The Session took note of the Norwegian experience that the AISyRisk system was not feasible when used for a new strategy for a national plan for infrastructure (road, maritime, aviation) with a focus on safety for the last ten years.

9.5 The Session invited Norway to provide an update on their experiences from the use of the AISyRisk system to the next meeting of the Expert Group.

9.6 The Session took note of the views by Norway that more HELCOM frequent historical AIS data would be needed. The Session invited Norway to provide suggestions for the appropriate update rate of data to the next meeting of the Expert Group for consideration.

9.7 The Session did not consider any other matters.

Agenda Item 10 Future work and Workplan

10.1 The Session took note that the updated Terms of Reference (ToR) for the Expert Group for Mutual Exchange and Deliveries of AIS & Data (AIS EG) as adopted by HELCOM Heads of Delegation via correspondence in January 2023 are available on the [HELCOM website](#).

10.2 The Session welcomed the offer by the Secretariat to host the next meeting in Helsinki, Finland, tentatively on **22-23 May 2024**. The Session invited Contracting Parties to re-consider hosting the next meeting and inform the Secretariat (Marta.Ruiz@helcom.fi) by **mid-August 2023**. The Session invited the Secretariat to confirm the dates of the meeting in due course.

Agenda Item 11 Memo of the Session

11.1 The Session approved the draft Memo of IC EG AIS 2-2023. The final Memo, incorporating corrections by the Session, was prepared by the Secretariat in consultation with the Chair of the Session.

Annex 1 List of participants

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