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## Background

The 32nd Meeting of the HELCOM Expert Working Group for Mutual Exchange and Deliveries of AIS & Data (AIS EWG 32-2021) was held on 26-27 May 2021 as on online meeting in line with the HELCOM policy on COVID-19. The Outcome of the Meeting is set out in the attachment to this document. The complete Outcome of the Meeting, including all Annexes can be found through this link.

## Action requested

The Meeting is invited to take note of the information and make use of it as appropriate.

# Outcome of the 32nd Meeting of the Expert Working Group for Mutual Exchange and Deliveries of AIS & Data (HELCOM AIS EWG 32-2021)

**Introduction**

0.1 In accordance with the Outcome of the 31st Meeting of the Expert Working Group for Mutual Exchange and Deliveries of AIS & Data (AIS EWG 31-2020, Paragraph 8.2), the 32nd Meeting of HELCOM AIS EWG was held on 26-27 May 2021. Considering the developments on COVID-19, the Meeting was held online.

0.2 The Meeting was attended by representatives from Denmark, Estonia, Finland, Germany, Latvia, Poland, Russia, Sweden, Norway and the EU (EMSA). Representatives from the Mediterranean AIS Regional server were invited to the meeting for sharing experience between regional seas. The list of participants is contained in **Annex 1**.

0.3 The Meeting was chaired by Mr. Alar Siht, Estonia, Chair of HELCOM AIS EWG.

0.4 Mr. Florent Nicolas, Associate Professional Secretary at the HELCOM Secretariat, acted as Secretary of the Meeting.

0.5 The Meeting agreed that the Meeting will be recorded if further information is needed to prepare the Meeting Outcome. The recording will be deleted once the Outcome has been published.

**Agenda Item 1 Adoption of the Agenda**

1.1 Following a round of introductions, the Meeting adopted the Agenda of the Meeting as contained in **documents 1-1** and **1-2**.

1.2 The Meeting agreed to discuss under the Agenda Item 7 an additional topic related to a project proposal under development and the possible implications for the Norwegian Coastal Administration hosting the HELCOM AIS Regional server.

1.3 The Meeting took note of the comment from Poland on requests from private organizations to implement their own AIS base stations. The Meeting agreed to discuss this topic under the Agenda Item 7 – Any other business.

**Agenda Item 2 Matters arising from other HELCOM meetings**

2.1 The Meeting took note of the information on meetings and decisions within HELCOM (**document 2-1**).

2.2 The Meeting took note of the the topic of AIS transponders on leisure boats related to the HELCOM Regional Action Plan (RAP) on Underwater Noise. The Meeting noted that this topic is not related to the AIS EWG for which the mandate is to work on Mutual Exchange and Deliveries of AIS & Data, but it could be raised at a later stage if the use of AIS transponders on leisure boats would affect the HELCOM AIS Regional server.

2.3 The Meeting took note of the information on the meeting plan for HELCOM bodies which outlines the importance of online meetings for the work of the different HELCOM bodies. The Meeting also took note that the next meetings of the HELCOM AIS EWG should preferentially be organized online.

2.4 The Meeting took note of the update of the HELCOM Baltic Sea Action Plan (BSAP) (**Presentation 1**).

2.5 The Meeting took note that the timetable for the implementation of the updated BSAP. While it should be implemented by 2030 to reach Good Environmental Status, some actions have their own target years which are spread until 2030.

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

3.1 The Meeting took a round-the-table to share information on national developments relevant to HELCOM AIS (including AIS coverage, Monitoring of VDL loading, Application specific AIS messages and VHF Data Exchange (VDE), E-navigation, Exchange of AIS information, AIS raw data buffering solution):

- **Denmark:** The Danish setup is unchanged since it was established, there are 18 SAAB R40 base stations located along the Danish coastline. A minor change has been that one station moved from one location to another due to a fire. VDES is planned, but as for now, where VDES capability is not yet a requirement for ships, Denmark is still waiting to develop the services. Planned VDES services are Navigation Warnings and Notices to Mariners promulgation, both terrestrial and satellite based. On data exchange, the Danish Maritime Authority (DMA) provides down sampled historical AIS data free of charge, and for a small fee (around 200 Euro) it is possible to subscribe to a proxy feed with livestream data from the Danish physical shore stations. AIS data buffering is part of the setup, a procedure is in operation, where drop in data is buffered so that they can be retrieved at a later stage if needed. Denmark is currently not participating in any externally funded E-Navigation project but is associate partners in STM BaltSafe. Denmark is also contributing in the development of E-Navigation in the S-100 standardisation process in IMO, IALA, IHO and IEC. Primarily in the area of MSI (S-124 and S-125) and standardized ship-to-shore reporting.

- **Estonia:** There are no significant developments have taken place since the last meeting AIS EWG 31-2020: the 13 base stations provided by Jotron Norway on the Estonian coast are still functioning since 2004. Additional four Comar400NG receivers have been installed for inland waterways in 2021. The IEC stream of AIS messages is provided to the HELCOM Regional server in Norway and to SafeSeaNet. MRS notices, based on AIS information and ship reports to GOFREP, are being sent as XML-messages to EU SafeSeaNet. The Estonian theoretical AIS coverage is from 26 up to 39 Nm (using IALA formula). No general measurements have been done around the coastal area. Estonia is not monitoring the VDL loading. Related to the application specific AIS messages: the Estonian technology is using IFM messages and types of messages are the same as mentioned in the report of AIS EWG 30-2019. Related to E-navigation, route planning and route exchange: EMA Tallinn Traffic is participating in STM BALT SAFE Project, financed by Interreg and Norway, the implementation of STM functionality should be finalised at Q3 2021. On the AIS information exchange: EE is providing raw AIS datastream to public entities using UDP protocol without limitations of AIS data for class A and class B. For research purposes, Estonia is providing AIS historical data in csv format to Tallinn Technical University for underwater noise analysing activities which started in 2019. The implementation of hardware proxies for AIS raw data buffering: on sites and is going on. There will be an update from AIS to AIS/VDES planned for 2021/2022, it depends on budgeting situation and nowadays preparations of tender specifications are going on (**Presentation 2**).

- **Finland:** Related the AIS network coverage, the reliability of the national AIS network has been further enhanced by increasing areas with double coverage. To achieve this goal, one new base station has been installed and few existing stations has been relocated in coastal areas. Total number of AIS base stations is now 56. Related to ASM messages, the project to update the ASM Hydro/Meteo message format has been finished. Information from almost all the marine weather observation stations along the coastline (currently 52) is now transmitted via AIS. In the context of STM BaltSafe project, the Finnish national AIS network provider Finntraffic is planning to purchase and deploy three (3) VDES Base Stations and three (3) VDES vessel equipment for test purposes. Tests will include validating that the legacy AIS operation is maintained with the new equipment, some test transmissions on ASM channels and possibly testing R-mode transmissions. Finland is sharing AIS as open data with removing class B data as well as class A data for fishing vessels.

- **Germany**: There are 35 AIS base stations in Germany covering areas for both the Baltic and North Seas. Some base stations are also positioned on offshore sites. There is no monitoring of VDL loading in Germany, however it would be possible. At the moment there are no requirements to use application specific messages however it would be possible within the current system. There are no public services to share AIS data.

- **Latvia:** No development since the last meeting of the AIS EWG.

- **Norway:** The Norwegian Coastal Administration (NCA) has totally 79 base stations sites, Included seven new greenfield stations and two terrestrial sites (**Presentation 3**). NCA is involved in a project called VASP together with Space Norway, EMSA and Kongsberg Seatex. It's planned for three services by using VDES satellite (**Presentation 4**):
  1. Ice charts
  2. SAR coordinates
  3. Mandatory reporting (MRS)

  The Norwegian Coastal Administration is involved in two e-navigation projects, Sesame II and STM Balt Safe. NCA-designated VTS centres will participate in the testbed for these projects in September / October:

  1. Routes (Ship-Shore and vv.)
  2. Automatically ship reporting (MRS Ship-shore.).

  NCA has no limitations of published AIS-data. However NCA is filtering AIS data for fishing vessels under 15 meters and recreational vessels under 45 meters. Regarding AIS raw data buffering solution, NCA will develop a new version of the proxy, which will include functionality for sending historical data for reducing gaps of AIS data to EMSA.

- **Poland:** There are no significant development in the AIS network since last meeting. There are currently 13 base stations on the Polish coast. Due to COVID-19, the activity of the Maritime office was limited and the focus has been on software matters to improve the continuity of the AIS data livestream. The buffering solution is based on the solution provided by Norway: the data is delivered to proxy and in case of issues, the data is sent at a later stage to the HELCOM AIS Regional server. So far, issue involving the buffering did not happen.

- **Sweden**: There are no major changes since the last meeting of the AIS EWG, except than one AIS base station has been added outside Gothenburg on the Swedish West coast. There are 41 base stations in total. There is no buffering at the national level but it is planned to implement it in 2021. There is detailed calculation of the coverage for each AIS base stations located under 60°N, this task was done within the R-Mode Baltic project (**Presentation 5**). The Swedish Maritime Administration is involved in some VDES projects but has no firm plans on updating from AIS to VDES. AIS data is sold to private compagnies as well as official bodies with a yearly fee.

- **Russia**: Two new AIS base stations in Kaliningrad are operational and will join the HELCOM network this autumn. The VDL load is at the same level. The national e-Navigation testbed compatible with STM and in working mode.

3.2 The Meeting discussed the relevance of sharing the AIS message 4 (base stations report) to ensure an overview of the AIS base stations available in the HELCOM Area.

3.3 The Meeting discussed the issue of sharing publicly the class B AIS data in relation to the EU Directive 2019/1024 on Open data and the General Data Protection Regulation EU2016/679 (GDPR). The Meeting highlighted that this topic was already raised during previous meetings and that there are no clear and legal indication if the class B can be considered as personal data.

3.4 The Meeting took note of the information raised by Norway that AIS data does not contain personal data as such, but personal information regarding a particular ship can be retrieved from other commercial databases. The use of this personal information with AIS data could be covered GDPR.

3.5 The Meeting took note of the information from EMSA on AIS data retransmissions solutions if national proxy buffering is not available (**Presentation 6**).

3.6 The Meeting took note of the information from Norway on the importance of using the NMEA format when national proxy buffering are in use, and for the data retransmission solution (**Presentation 7)**.

3.7 The Meeting agreed to continue to share information among the Contracting Parties of the Helsinki Convention (CPs) and Norway on the current status of AIS data buffering at the national level during the next AIS EWG meetings.

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

4.1 The Meeting took note of the information from Norway on the additional link for the backup monitoring site of the HELCOM AIS regional server (**Presentation 8**).

4.2 The Meeting 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 difficult format to read (i.e. NMEA format), Norway is planning to further develop a platform to make available csv files (decoded data). This platform is currently sharing publicly AIS data for the Norwegian territorial waters(**Presentation 8**). The next planned developments are to make available historical AIS data to the Baltic Sea countries authorities responsible for AIS, under user restrictions (i.e. usernames and passwords).

4.3 The Meeting welcomed the offer from Norway to develop this service for the Contracting Parties.

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

5.1 The Meeting took note of the overview of requests to access and to use the HELCOM AIS data, received by the Secretariat during the period from June 2020 to May 2021 (**document 5-1**).

5.2 The Meeting took note of the information on the request from the Port of Oslo to access livestream AIS data for port optimisation (i.e. estimation of the time of arrival). The Meeting discussed this application and agreed that it is fitting under the Appendix 1.

5.3 The Meeting invited the Secretariat to proceed with the data agreement with the port of Oslo with the involvement of the AIS technical representative from Norway to implement the livestream between the HELCOM Regional server and the requestee.

5.4 The Meeting took note of the information from Italy that the Mediterranean Regional server is also sharing livestreams of AIS data to ports for ports optimisation and management.

5.5 The Meeting took note of the information from the HELCOM Secretariat that shipping density maps for the years 2017 to 2019 will be made available on the HELCOM Map and Data Service as well as on the AIS explorer. The Meeting also took note on the current work carried by the Secretariat to harmonize data for the year 2020 due to some data issues in the Regional server. Once the data for 2020 is harmonized, the shipping density maps will be generated and published on the Map and Data Service as well as on the AIS explorer.

5.6 The Meeting took note of the information from EMSA and the HELCOM Secretariat on sharing AIS data products (**Presentation 9**). EMSA is making available shipping density maps via EMSA's SEG application and providing maps to the EMODnet human activities portal. The HELCOM Secretariat is making publicly available shipping density via the Map and Data Service, as well as statistics on passages lines.

5.7 The Meeting took note of the information that EMSA and the HELCOM Secretariat will remain in contact, prior to the next AIS EWG meetings, to discuss the last updated to make available shipping density maps and other AIS related data products.

5.8 The Meeting discussed the possible update the form for a standard agreement on access to and use of HELCOM AIS data (Appendix 3 of the HELCOM Recommendation 33/1). As highlighted by HELCOM AIS EWG 31-2020 (Outcome, paragraph 5.3), this form does not forbid AIS data users to share AIS data with which it is possible to identify particular ships (**document 5-2**).

5.9 The Meeting discussed the different variables available in the AIS data which could be used to identify particular ships, such as the IMO and MMSI numbers, the name and the call sign. The Meeting noted the comment from Finland that more attributes can be used to identify particular ships such as the dimensions, the position of the ship at a certain time, etc.

5.10 The Meeting agreed with the following phrasing: "The recipient also assures not to share any information with which it is possible to identify individual ships and/or personal data" and invited the Secretariat to communicate with the HELCOM Maritime Group on this matter. The Meeting agreed to keep the wording at a general level for a broader understanding.

5.11 The Meeting took note of the information that the AIS class B data is not made available from all the Contracting Parties. The Meeting also took note that based on the Recommendation 33/1, the Secretariat may on case-by-case basis reserve its right not to share AIS class B, if it concludes that it would violate the GDPR.

5.12 The Meeting discussed on the possible data discrepancies if the class B data is not made available by all Contracting Parties.

5.13 The Meeting agreed to discuss during the next AIS EWG Meetings, in the section related to national developments, the national positions on sharing class B AIS data. Based on this information and if needed, the next AIS EWG Meeting could discuss again this topic of sharing class B AIS data under Recommendation 31/1.

5.14 The Meeting took note of the information from Norway on the possibility to filter out the AIS class B AIS data.

**Agenda Item 6 Cooperation with other organizations**

6.1 The Meeting took note of the information from Finland on the recent developments at IALA ITU-R on updating the VDES recommendations ITU-R M.2092-0 and ITU-R M.1371-5. The Meeting also took note that IALA suggested a new message (number 29) to be included in AIS on detailed ship information such as the detailed ship, the number of passengers, etc (**Presentation 10**).

6.2 The Meeting noted the importance to follow this topic since it would impact the HELCOM AIS Regional server as well as the Recommendation 33/1.

6.3 The Meeting took note of the information from the Italian Ministry of Sustainable Infrastructure and Mobility on the Mediterranean AIS Regional server (**Presentation 11**). The Meeting discussed on the synchronisation of the mobile stations in the Mediterranean Sea area.

6.4 The Meeting noted the relevance of sharing experience on regional servers and considered to have, if possible, such presentations in future meetings.

**Agenda Item 7 Any other business**

7.1 The Meeting took note of the information from Finland on the status of the long-range AIS transmission control along their coasts (**document 7-1, Presentation 12**). The Meeting also took note of the information from the Meeting participants that no interferences were identified in the HELCOM Area.

7.2 The Meeting took note of the information from Norway on using the AIS message 27 (i.e. from satellite). The satellite technology can pick up more signals in busy shipping areas. The Meeting discussed that keeping the transmission of the message 27 is relevant.

7.3 The Meeting updated the list of contacts of HELCOM AIS EWG and agreed to add this list as **Annex 2** to the Outcome (**document 7-2**).

7.4 The Meeting took note of the information from the Secretariat that the update of the contacts of HELCOM AIS EWG is important since only these contacts will receive invitations and documents for future meetings.

7.5 The Meeting updated the lists of contacts for technical representatives and AIS agreements and took note that these lists are not publicly available on the HELCOM Meeting Portal but are available upon request to the Secretariat (florent.nicolas@helcom.fi).

7.6 The Meeting took note of the information from the Secretariat that the lists of contacts for technical representatives and AIS agreements will be sent to the Meeting participants once the updates are completed during the Meeting.

7.7 The Meeting took note of the information regarding a project proposal under development to develop a single window risk assessment software platform for European Pollution Preparedness and Response (PPR) authorities. The Meeting noted that the AISyRisk system by the Norwegian Coastal Administration (NCA) could be used as a basis for this integrated software platform, which the NCA has previously indicated to the HELCOM Response Working Group in the context of discussions related to the OpenRisk Project (2017-2018) could be made available to use also for HELCOM Contracting Parties. It was, however, noted that in order to use the AISyRISK system as proposed in the initial project proposal, the AIS data frequency should be increased from the current 6 minutes to 30 seconds. The Meeting noted the potential consequences related to infrastructures (e.g.. data storage, data flows, etc.) for the Contracting Parties and HELCOM Secretariat.

7.8 The Meeting discussed the matter and agreed that such an increase would be technically feasible, but that there would be costs involved in particular for the NCA and the Secretariat. The Meeting invited the Secretariat to liaise with the Norwegian technical representatives to further discuss on the matter.

7.9 The Meeting took note of the information from Poland on private companies which are willing to establish AIS base stations. The Meeting agreed to add this topic of discussion to the agenda of the next meeting of the HELCOM AIS EWG (i.e. AIS EWG 33-2022). The Contracting Parties and Norway will be invited to share views on the topics, based on a document will be submitted by Poland.

**Agenda Item 8 Future work and meetings**

8.1 The Meeting welcomed the offer by Norway to host the next meeting of the HELCOM AIS EWG and agreed to arrange AIS EWG 33-2022 with a possibility to have the meeting either in Svalbard or Oslo, tentatively during the last week of May or first week of June 2022. The final location and dates will be confirmed by intersessional correspondence between the host and the HELCOM Secretariat as soon as possible, for example by end of 2021 to have access to the best possible options to limit travel costs.

8.2 The Meeting took note of the information that the HELCOM Secretariat could also host the next meeting.

**Agenda Item 9 Outcome of the Meeting**

9.1 The Meeting adopted the Outcome of HELCOM AIS EWG 32-2021. The Outcome of the Meeting will be made available in the HELCOM Meeting Portal, together with the documents considered and presentations given during the Meeting.