

NATIONAL REPORT OF ESTONIA

Executive summary

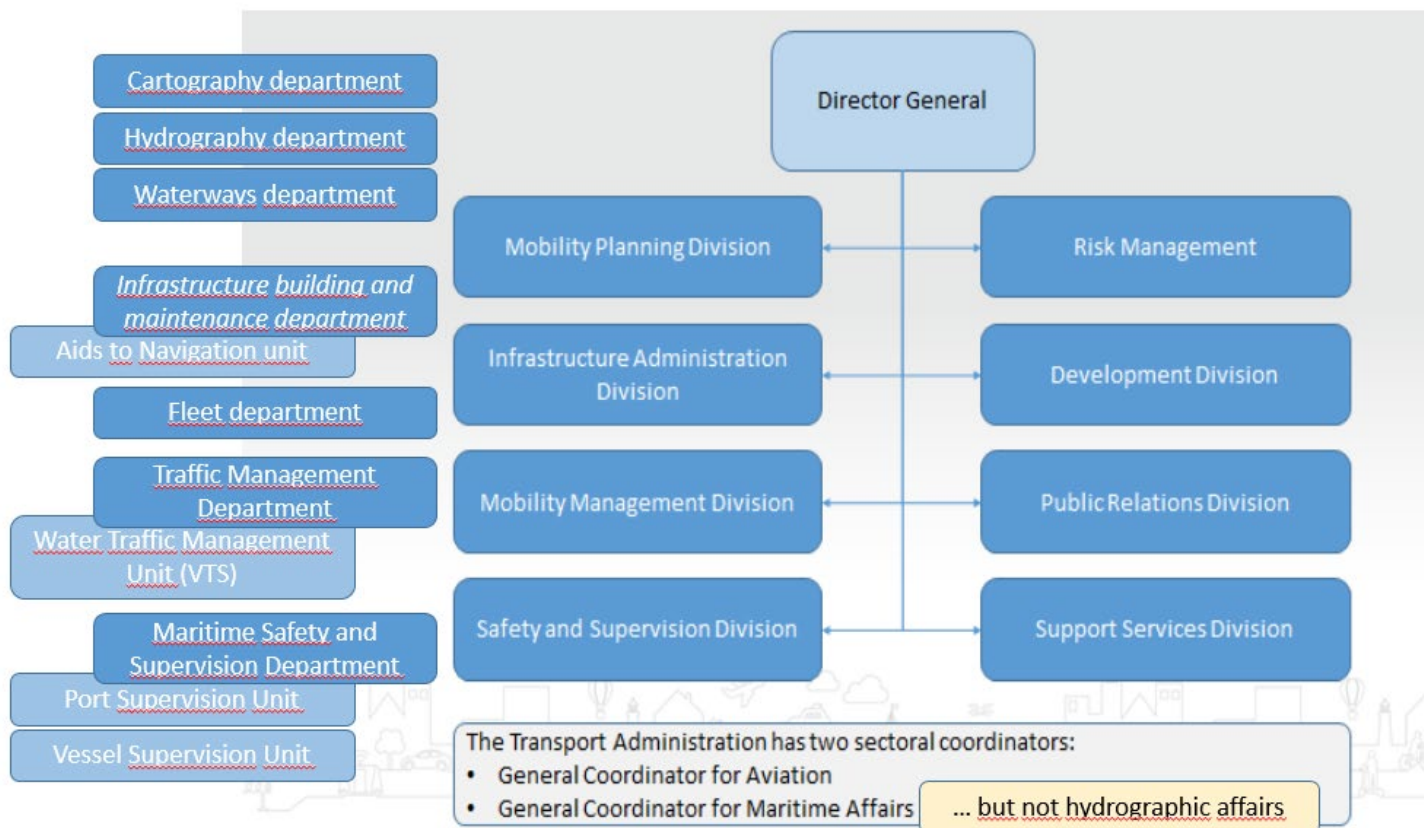
This report summarizes the activities of Estonian Transport Administration (ETA) in the field of hydrography since the Baltic Sea Hydrographic Commission 26th video conference in 2021.

- Information about the hydrographic surveys and cartographic production

1. Hydrographic service

Since 1.07.2021 Estonian Transport Administration established a new structure, where hydrographic activities in Estonian Transport Administration are handled by the Mobility Planning Division that arranges the work of cartography, hydrography, and waterways departments.

The departments handling maritime and hydrographic activities and divided in different divisions as follows:



The service in the field of hydrography is provided by two departments:

- 1) Hydrography Department (head Mr. Peeter Väling),
- 2) Cartography Department (head Mr. Olavi Heinlo)

Also partly by Waterways Department and Fleet Department under the Infrastructure Administration Division of the ETA. IHO Yearbook is up to date for relevant contacts.

2. Surveys

Survey vessels

The Hydrography Department (13 officers) deals with surveying (data collecting and post-processing). For surveys the following hydrographic vessels are used:

- 1) JAKOB PREI (crew 8 person) – 25 m SWATH type survey vessel for open sea;
- 2) EVA-320 (crew 4 person) – 18 m twin-hull survey vessel for coastal areas;
- 3) KAJA (crew 1 person) – Operates since April 2016. 7.3 m twin-hull survey-boat on rivers and shallow coastal areas. Building was partly financed by FAMOS.
- 4) EVA-301 (crew 5 person) – 20 m twin-hull multipurpose vessel for survey in inland waters and for maintenance of the aids to navigation.

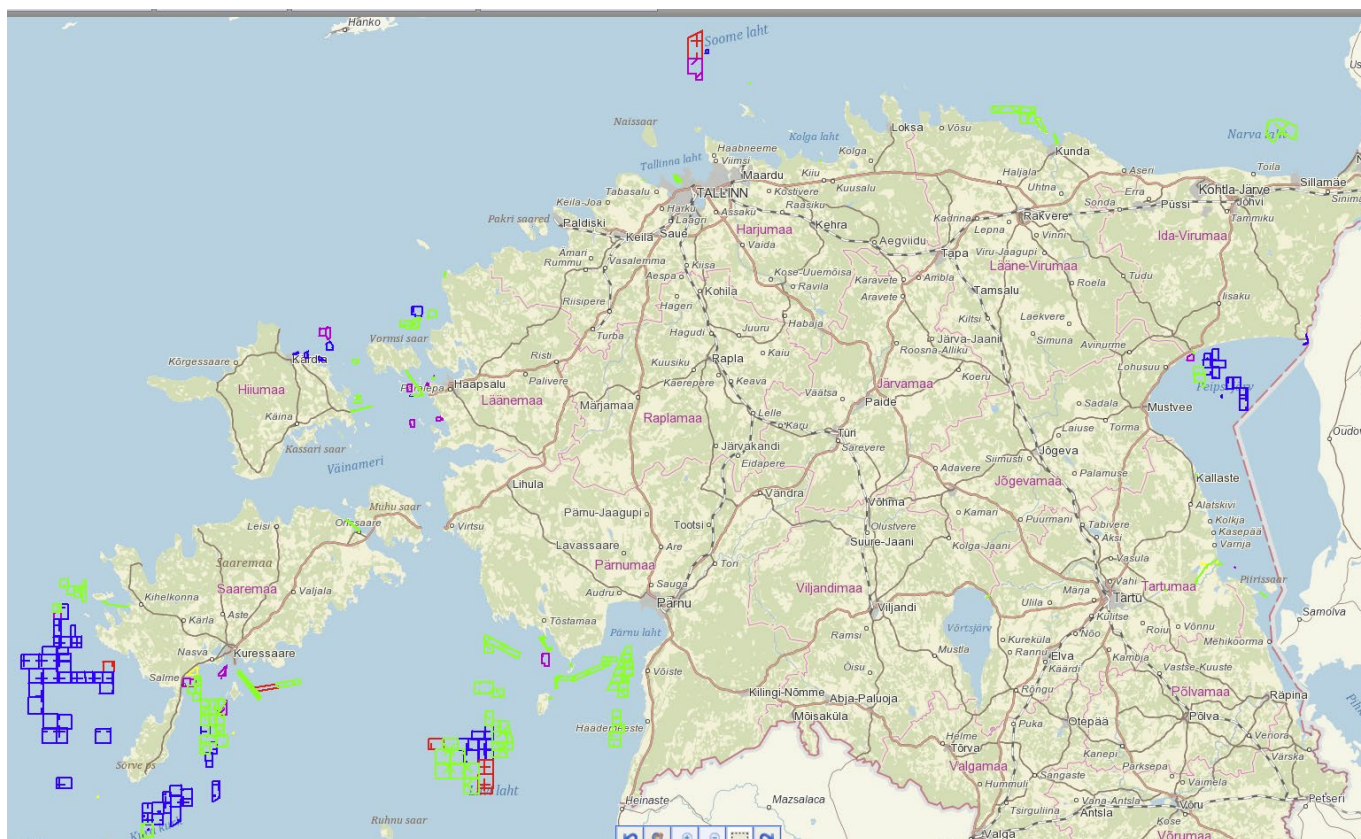
Hydrographic survey

In 2021 hydrographic survey in Estonian waters was carried out as follows:

- 1) 1267 km² – on HELCOM routes in the Gulf of Finland, Gulf of Riga and the Northern Baltic (CAT II and III).
- 2) 72 km² – Lake Peipsi;
- 3) 2 km² – Harbor areas (surveyed by private companies)

All surveys were carried out according the IHO S-44 standards Special, Ia and Ib.

For maintaining and accessing survey data a web-accessible database called the Hydrographic Information System (HIS) is used. It is a seamless database for hydrographic information such as survey areas, depths, underwater objects, contours and storage for raw data. Management of all Estonian survey areas including inland waters is carried on depending on the status of the area (planned, under survey, surveyed, under cleaning, cleaned, under validation or final). Survey data from other parties/companies are included in HIS as well. Backup of data is automatic. Public access (without download services so far) is available at the following link: <https://his.vta.ee:8443/HIS/Avalik?REQUEST=Main>



New surveys on 2021

CSB and SDB data are not used in Estonia.

3. New charts & Updates

From the 1st of January 2018 Estonia gave up the Kronstadt Tide Gauge that served as zero point of the height system so far and Estonian Maritime Administration started implementation of Baltic Sea Chart Datum (BSCD2000) from beginning 2018 for ENC-s and Paper Charts

ENCs:

Estonian waters are completely covered with ENC-s on the relevant navigational bands.

Estonia has no overlaps according to BSICCWG7 BSHC overlap report – May 2021 (which is currently the latest overlap report)

At the end of 2021 total 138 cells in navigational purpose bands 2 – 6 (band 2 – 7 cells, band 3 – 14 cells, band 4 – 26 cells, band 5 – 17 cells, band 6 – 74 cells).

In 2021 2 new cells, 65 new editions and 348 updates were produced.

In 2021 new editions of 2 harbour ENC-s were produced in new height system – BSCD2000. By the end of 2021 99% of berthing and harbour ENC-s was published in BSCD2000 vertical system. In 2022 it is planned to finish the remaining large scale ENC-s and start transition of Approach ENC to BSCD2000 vertical system.

ENC Distribution method

ETA is a member of RENC (PRIMAR) and also provides data for usage in derived products for various producers.

RNCs

Not produced.

INT charts

At the end of 2021 ETA has 25 INT charts. Two new editions of charts 881/INT1797 “Saaremaa sadam” and 931/INT1348 “Paljassaare sadam” were printed and assigned INT numbers in February 2021.

National paper charts

Estonian waters are completely covered with paper charts on all relevant navigational bands.

The portfolio of the currently updated paper charts for the Estonian waters comprises 65 charts produced in accordance with international standards. Chart 856 has been canceled due to low demand. We will continue the optimization of paper chart portfolio according to demand.

In 2021 new editions of 8 paper charts were produced in new height system – BSCD2000. 28 harbour plans were produced for Sailing Directions and published for chart albums through NtM in BSCD2000.

The scheme of the Estonian paper charts is given here:

<https://transpordiamet.ee/en/mobility-and-transportation/navigational-information/navigational-charts>

Other charts, e.g., for pleasure craft

For pleasure craft ETA produces all together 3 volumes of “Charts of Estonia” in A3 format.

In 2021 a new edition of Charts of Estonia Vol 3 Väinameri “From Saaremaa to Ruhnu” was produced. In this edition all berthing and harbour plans are in BSCD2000 and approach/coastal charts in BHS-77 vertical system.

4. New publications & Updates

New Publications

No new navigational publications were published in 2021 and all existing publications were updated monthly

Digital publications [List of Lights](#), [Notice to Mariners](#) and [Sailing Directions](#) are available on the homepage of ETA <https://transpordiamet.ee/en> under the Mobility and Transport section and updated monthly.

Port Register database <https://www.sadamaregister.ee/>

State Port Register will provide an overview of all ports registered in Estonia, including maritime ports and inland ports. The register contains information about port location, port technical data, port services, port manager and harbor master.

Full digital database of aids to navigation, available in Estonian language (but successfully translatable by browser) is available at <https://nma.vta.ee/>

5. MSI

Existing infrastructure for transmission

Navigational warnings are published on the ETA navigational warning GIS application (<https://gis.vta.ee/navhoiatused/en.html>) and are also announced over the maritime radio in Estonian and English. The radio frequencies, channels and times can be checked on the State Infocommunication Foundation website - <https://www.riks.ee/maritime-radio-communications/chart-of-base-stations/submitting-and-monitoring-messages-incl-mf-vhf>

The screenshot shows the 'Navigational Warnings' application from the Estonian Transport Administration. On the left, a list of warnings is displayed, including 'No 90: Uncharted floating AtoN' (28/07/2021, 1:13 PM), 'No 89: Competitions' (28/07/2021, 11:00 AM - 01/08/2021, 6:00 PM), 'No 88: Construction works' (27/07/2021, 3:00 PM), 'No 87: Radar coverage' (26/07/2021, 11:35 AM), 'No 85: Uncharted obstruction' (21/07/2021, 3:34 PM), 'No 80: Dredging works' (14/07/2021, 9:03 AM), 'No 77: Fixed beacon light temporarily unlit' (07/07/2021, 1:47 PM), 'No 74: Fixed beacon light temporarily unlit' (01/07/2021, 1:27 PM), 'No 70: Dredging works' (28/06/2021, 11:04 AM), and 'No 38: Harbour entrance limit' (23/04/2021, 11:10 AM). The main map area shows a map of Estonia with a popup for 'Uncharted floating AtoN' (No 90) over the Baltic Sea. The popup details include: Number 90, Warning title 'Uncharted floating AtoN', Warning output 'Kõduleht / Tallinn raadio', Date from 28/07/2021, 13:13, Date to, Area 'Northern Baltic Sea', and Notification text: 'Uncharted yellow special-purpose light-buoy FI (S) Y 20s is installed west of Sõrve peninsula in position 58°06.29'N, 021°40.35'E and underwater scientific equipment within a radius of 0.3 NM.' The map also shows various Estonian counties and cities like Tallinn, Haapsalu, and Võru.

Navigational warning GIS application

NAVAREA 1 Baltic Sea sub area coordinator Sweden is responsible for NAVTEX Service covering the Estonian waters, while ETA provides the content for the NAVTEX warnings for Estonian sea area. Messages are transmitted by Estonian State Infocommunication Foundation transmitters.

In 2021 Estonia published 166 navigational warnings of which 42 warnings were transmitted over NAVTEX

6. C-55

Information about surveys updated 20/10/2021 (details on IHO webpage)

7. Capacity Building

All cartographers (9) have completed Primar S-100/S-101 ENC courses (6 modules)

8. Oceanographic activities

Nothing to report

9. Spatial Data Infrastructures

Marine data is used for variety of non-navigational purposes in Estonia. Maritime spatial planning, infrastructure development, environmental-, educational- and scientific purposes. ETA has published marine spatial data according to the INSPIRE requirements in National Spatial Data Portal - <https://geoportaal.maaamet.ee/eng/INSPIRE-p712.html>

ETA is a member of Estonian Maritime Spatial Planning working group that is led by Ministry of Finance Overview of MSP activities can be found here <http://mereala.hendrikson.ee/>

10. Innovation

At 2021 the removable bar sweeping system was installed on EVA-320. It is needed in some critical channels where multibeam surveys do not provide correct data because of the thick layer of sea grass in the bottom.

11. Other activities

Participation in IHO Working Groups

ETA is participating in the following committees and WG: HSSC, ENCWG, S-101PT, NIPWG, CDWG, NCWG, BSICCWG, BSMSIWG, NSBSMSDIWG, MWG and BSBDWG.

Meteorological data collection

In frame of the project EfficienSea (Efficient, Safe and Sustainable Traffic at Sea) for the Baltic Sea a portal called METOC (<http://on-line.msi.ttu.ee/metoc/>) was established. This portal gives information about all operative/ real time measurements in the Estonian coast and coastal sea. The METOC collects all measured data from different measurement stations of the Marine System Institute of the University of Technology of Tallinn, the Estonian Environment Agency (EEIC) and also from sensors of navigational buoys of the Estonian Maritime Administration. From measurement stations the following information is available, which is important for navigation: wind speed and direction, visibility, sea level, wave height etc. From buoys information regarding wave height and period is available.

Information regarding weather observation and forecast is available on the home page of the Estonian Environment Agency (<http://www.ilmateenistus.ee/?lang=en>).

Good solution for checking water level during the transition period from BHS77 to BSCD2000 is provided by the Tallinn University of Technology Marine Systems Institute <http://on-line.msi.ttu.ee/meretase/?en>

Geospatial studies

GIS

All ENC-s, hydrographic data, waterways data, aids to navigation data for Estonia is displayed in web application Nutimeri. Since 2019 the web application also displays AIS data <http://gis.vta.ee/nutimeri/>
All Estonian navigational warnings are available on GIS <https://gis.vta.ee/navhoiatused/en.html>

Magnetic and gravity surveys

Magnetic and gravity surveys are handled by Estonian Geological Service and Estonian Land Board respectively.