

NATIONAL REPORT OF ESTONIA

Executive summary

This report summarizes the activities of the Estonian Maritime Administration in the field of hydrography since the Baltic Sea Hydrographic Commission 24th Conference in 2019.

1. Hydrographic service

The service in the field of hydrography is generally provided mainly by two departments and partly by Fleet Department of the Hydrography and Aids to Navigation Division (head Mrs. Kaidi Katus) of the Estonian Maritime Administration:

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

Altogether about 35 specialists are occupied in those two departments and partly 18 seafarers from Fleet Department.

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 2019 hydrographic survey in Estonian waters was carried out as follows:

- 1) 1125 km² – on HELCOM routes in the Gulf of Finland, Gulf of Riga and the Northern Baltic (CAT II and III).
- 2) 39 km² – Lake Peipsi and river Emajõgi;
- 3) 3 km² – Harbor areas (surveyed by private companies).

All surveys were carried out according the IHO S-44 standards Special, Ia and Ib. Cat II and III surveys are covered by FAMOS ODIN.

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>

3. New charts & Updates

From 01st of January 2018 Estonian 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 all relevant navigational bands.

At the end of 2019 total 133 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 – 69 cells). ENC-s are updated in real time.

In 2019 0 new cells, 29 new editions and 225 updates were produced.

In 2019 new editions of 2 harbour ENC-s, 12 berthing ENC-s were produced in new height system – BSCD2000.

ENC Distribution method

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

RNCs

Not produced.

INT charts

EMA produces and updates 23 INT charts.

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 66 charts produced in accordance with international standards.

In 2019 new editions of 1 harbour and 3 berthing paper charts were produced in new height system – BSCD2000. 28 harbour plans was produced for Sailing Directions and published for chart albums through NtM in BSCD2000.

The scheme of the Estonian paper charts is given here:

<http://adam.vta.ee/teenused/hnt/dokumendid/4kartogrammi.pdf>

Other charts, e.g. for pleasure craft

For pleasure craft EMA produces all together 3 volumes of “Charts of Estonia” in A3 format. Previously we produced 4, but inland river Emajõgi chart album has been cancelled in 2020 because of low interest towards the product. No new editions of pleasure craft albums was published in 2019.

4. New publications & Updates

New Publications

No new navigational publications were published in 2019

Digital publications *List of Lights*, *Notice to Mariners* and *Sailing Directions* are available on the homepage of EMA <https://veeteedeamet.ee/en> and updated monthly.

In 2020 New version of the Port Register database has been released <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 on the EMA home page <https://nma.vta.ee/>

5. MSI

Existing infrastructure for transmission

Local navigational warnings are published on the EMA website (<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>

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

6. C-55

Information about surveys updated July 2020 (details on IHO webpage)

7. Capacity Building

One cartographer attended 11th Course in Marine Cartography and Data Assessment (FIG/IHO/ICA Cat B) from 2 September – 13 December 2019 in Taunton, UK

One hydrographer completed IHO Cat A course in University of Southern Mississippi, USA during Aug.2018 – Aug.2019.

8. Oceanographic activities

Nothing to report

9. Other activities

Participation in IHO Working Groups

EMA is participating in the following committees and WG:

HSSC, ENCWG, S-101PT, NIPWG, CDWG, NCWG, BSICCWG

2020 we assigned a new member to the NSBSMSDIWG

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

Data for INSPIRE Directive Annex I, II and III are available for public at the Estonian National Geoportal [https://inspire.maaamet.ee/services/transport-networks-\(tn\)](https://inspire.maaamet.ee/services/transport-networks-(tn))

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>