

NATIONAL REPORT OF POLAND

Executive summary

This report summarizes activities of the Hydrographic Office of the Polish Navy since the previous Baltic Sea Hydrographic Commission 26th Conference in 2021.

1. Hydrographic Office / Service

The National Hydrographic Service in Poland is created by the Hydrographic Office of the Polish Navy (HOPN) and the Maritime Administration. The HOPN is located in the Ministry of Defence. The main responsibility of HOPN is:

- hydrographic surveys coordination,
- paper charts compilation and production,
- nautical publications production,
- ENCs service,
- national hydrographic database maintenance,
- Navigational Warning System coordination, MSI system supporting.

2. Hydrographic surveys

Hydrographic surveys conducted in 2021 and 2022 were focused on finishing CAT II HELCOM routes (RCP-01) and also on shallow water areas - critical for the safety of navigation. Surveys were conducted by the Hydrographic Support Squadron (hydrographic ship ORP Heweliusz, motorboats: MH-2/3/4 and RIBs)

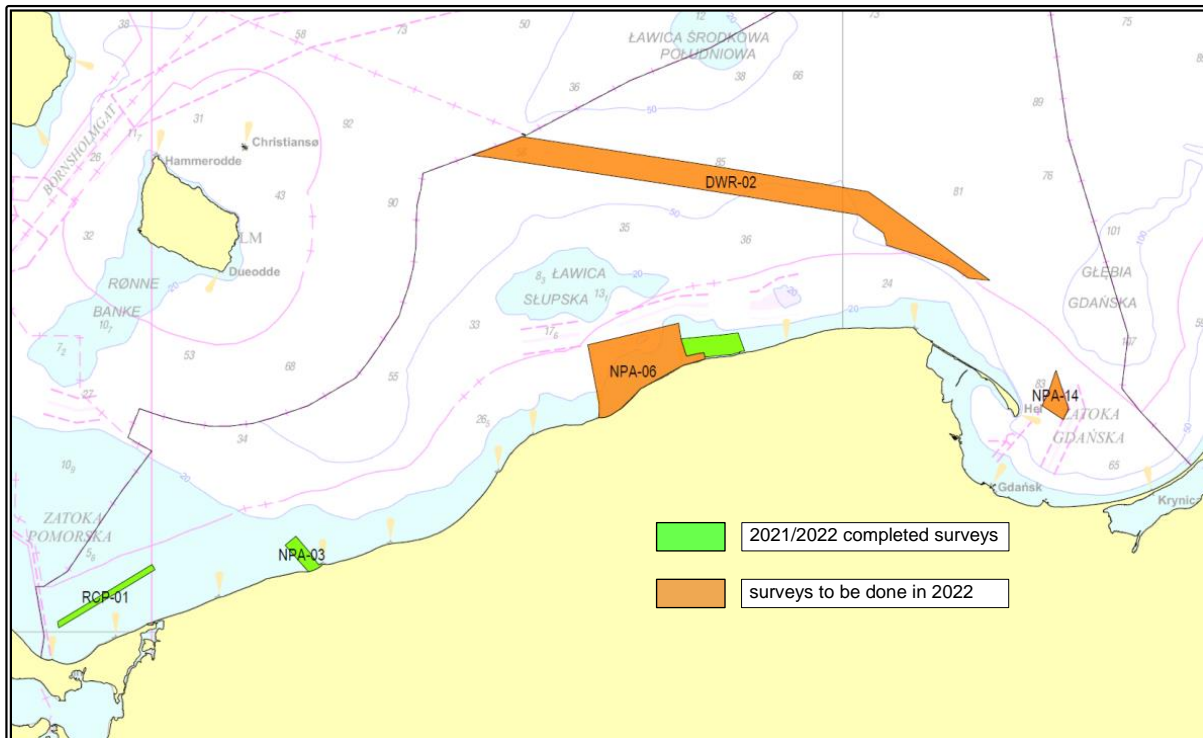
The last CAT I route in Polish waters is planned to be surveyed in 2022 with the use of the autonomous surface vehicle DriX.



Between 15th July 2021 and 15th July 2022, in Polish waters, hydrographic surveys were carried out as follows:

- 61,8 km² - HELCOM routes Cat. II (RCP-01),
- 133,7 km² - HELCOM routes Cat. III (NPA-03/06).

All surveys comply with the IHO S-44 Standards Special and 1a.



3. New Charts & Updates

a) ENCs:

Polish waters are completely covered with all relevant navigational bands.

Total: 64 cells in navigational purpose bands 2 – 5 (Band 2 – 1 cell, Band 3 – 15 cells, Band 4 – 15 cells, Band 5 – 33 cells).

ENCs are updated on a weekly basis.

In the year 2021 – 12 new editions and 111 updates were released.

In the year 2022 (until 01 July) 44 new editions and 109 updates were released.

A new ENC in band 6, covering Gdynia Harbour is planned to be released in 2022.

b) ENC Distribution method

All the Polish ENCs are distributed through the PRIMAR authorized distributors network.

c) RNCs

Not produced

d) National Paper Charts

Following chart were compiled and published:

2021:

41 Bałtyk. Zatoka Gdańska. Zalew Wiślany.

59 Bałtyk południowy. Wybrzeże polskie. Podejście do portu Dziwnów.

2022:

45 Bałtyk. Zatoka Gdańska. Zatoka Pucka.

e) INT Charts

2021: -

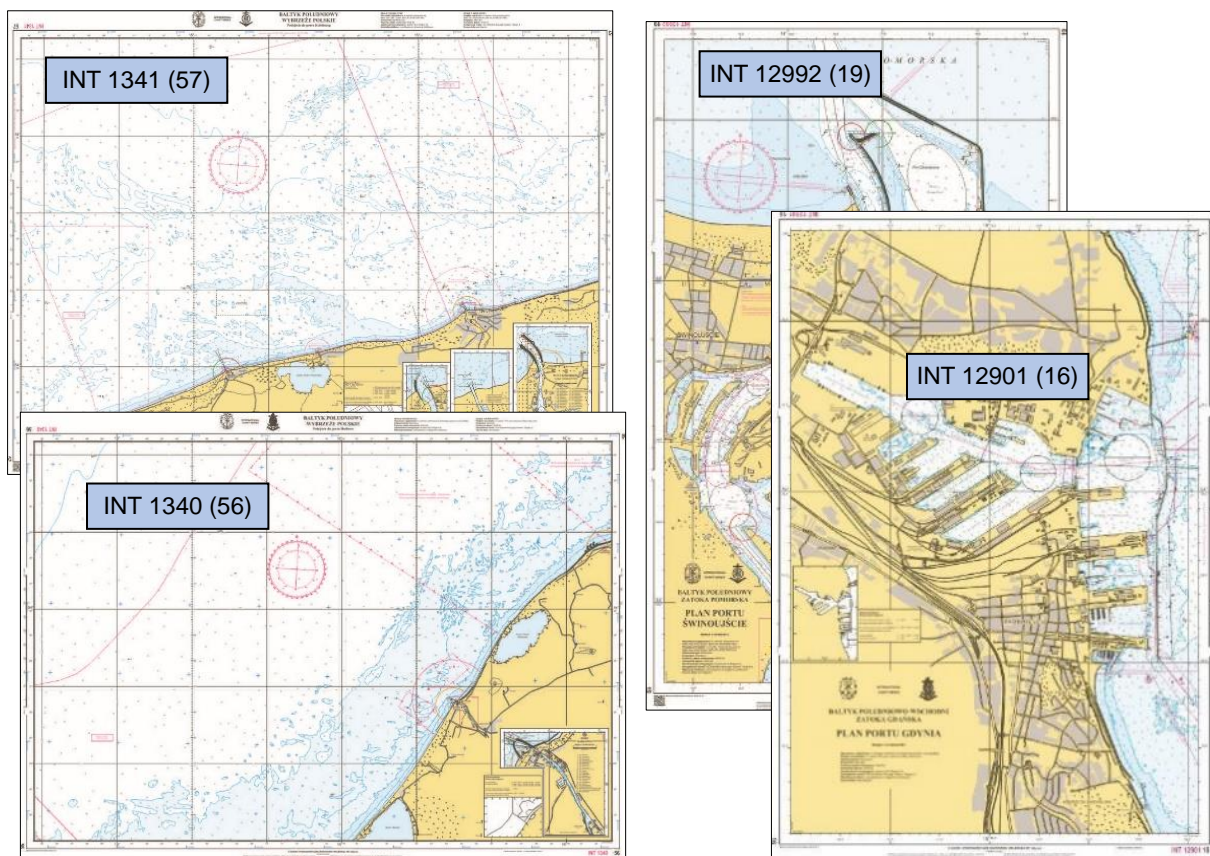
2022:

INT 12901 (16) Bałtyk. Zatoka Gdańska. Plan portu Gdynia.

INT 12992 (19) Bałtyk południowy. Zatoka Pomorska. Plan portu Świnoujście.

INT 1340 (56) Bałtyk południowy. Wybrzeże polskie. Podejście do portu
Darłowo.

INT 1341 (57) Bałtyk południowy. Wybrzeże polskie. Podejście do portu
Kołobrzeg.



f) Other Charts, e.g. for pleasure craft:

2022:

1020 Od Zatoki Pomorskiej do Mierzei Helskiej.

g) Challenges and achievements

In October 2021, the HOPN published the first nautical chart with soundings referred to the Baltic Sea Chart Datum 2000 vertical reference system. By the end of July 2022, nine new editions of nautical charts were published in accordance with the new reference system. The BSCD2000 implementation in Polish waters is planned to be completed in 2023 (harbour and approach band).

4. New publications & Updates.

2022:

List of Lights – 522,

5. MSI

Existing Infrastructure for Transmission

Playing the role of the National Hydrographic Service, the HOPN operates as the National Coordinator of Navigational Warnings in the Polish Area of Responsibility. NAVTEX Service covers Polish waters, with messages being transmitted by the Polish Rescue Radio (new station operated by the Polish Maritime Administration). In total, in 2021, 387 Navigational Warnings were promulgated by the HOPN as Local, Coastal and Subarea warnings. Until 31 July 2022, 182 navigational warnings were promulgated.

6. C-55

Latest update: August 2022

7. Capacity Building

In the stated time-frame, Poland was not active in the capacity building programme.

8. Oceanographic activities

The Maritime Branch of the Institute of Meteorology and Water Management – National Research Institute (IMGW-PIB) in Gdynia is the organization responsible for oceanographic services in Poland. It provides daily forecasts of water temperature, salinity, currents, sea level, waves height and ice for the Southern Baltic. Forecasts are based on the SWAN and MIKE DHI 3D models as well as local models for the Gulf of Gdansk and Vistula Lagoon and Pomeranian Bay. All forecasts are available on the internet at <https://baltyk.imgw.pl>

Tide gauge network is managed by the Institute of Meteorology and Water Management. The service (automatic readings) is available on the internet at <https://hydro.imgw.pl>

Other activities:

- Ferry-Box system of IMGW in Gdynia installed on board of the ferry of Stena Line Company, serving the Gdynia-Karlskrona route. The system measures water temperature, salinity, oxygen, fluorescence, and can collect samples of water for further analysis when under way.

9. Spatial data infrastructure, status of MSDI

MSDI national portal

The national MSDI portal was implemented in 2020 by the Maritime Administration. The portal is available on the Internet at <https://sipam.gov.pl>. The portal presents marine spatial data and provides downloadable data, metadata and reference documents. The HOPN is responsible for updating bathymetric layers, contours and bottom objects.

Spatial Plan for Polish waters.

Spatial plan for Polish waters was published in May 2021 and established for the period of 10 years. The plan defines areas with priority of: marine transport, fishery, environmental protection, costal protection, aquaculture, scientific research, technical infrastructure, national defence, renewable energy (wind farms), oil and gas exploration and extraction and others. The plan is available as a WMS service at SIPAM geoportal (as a separate map composition):

<https://sipam.gov.pl/geoportal>

10. Innovation

In 2022 the new autonomous surface vehicle iXblue DriX was commissioned to the hydrographic service. ASV DirX is equipped with multibeam echosounder (EM2040), sound velocity profiler and all necessary tools including satellite communication, anti-collision system, to conduct inshore and offshore hydrographic surveys up to 10 days at sea. This almost 8 meters long vehicle is currently in testing phase and it is planned to be mounted aboard the hydrographic ship ORP "Arctowski" to robust its survey capability.



11. Other activities

Gravity surveys

In 2022 the HOPN plans to continue the gravity surveys in Polish waters in cooperation with the Gdańsk University of Technology. This year's campaign is focused on detailed measurements of detected anomalies and also to complete 2021 measurements. All recorded data are to be transferred to FAMOS quasi-geoid modelling project.

World Hydrography Day

The Hydrographic Office of the Polish Navy, together with the Polish Hydrographic Association organized on 24th of June the national celebration of the World Hydrography Day. The event took place at the Naval Museum in Gdynia and gathered the representatives of the hydrographic community, the Maritime Administration, representatives of universities and the hydrographic industry.

The collage features several key elements:

- Poster (top left):** Celebrates the 2021-2030 United Nations Decade of Ocean Science for Sustainable Development. It features the text "WORLD HYDROGRAPHY DAY 2022" and "krajowe obchody Światowego Dnia Hydrografii". Logos of the Hydrographic Office of the Polish Navy and the Polish Hydrographic Association are present. The slogan "Hydrography – contributing the United Nation Ocean Decade" is at the bottom.
- Bathymetric Maps (top right):** Two 3D maps showing seabed topography. The top one shows a ship's track with depth contours, with text: "Głębokość minimalna - 1,57 m / 1,78 m" and "Głębokość przy dnie - 2,50 m". The bottom one shows a larger vessel's track.
- Speaker (bottom left):** A man in a dark suit speaking at a podium during the event.
- Presentation Slide (bottom middle):** Titled "WSPÓLczesność BATYMETRII" (Contemporary Bathymetry). It discusses "Sonda z wykorzystaniem sondy wielowiązkowej MBES" (MBES multi-beam sonar) and shows a ship emitting sonar beams.
- Event Signage (bottom right):** A banner for "ŚWIATOWY DZIEŃ HYDROGRAFII" (World Hydrography Day) with the Hydrographic Office logo.