

**MEDITERRANEAN AND BLACK SEAS HYDROGRAPHIC
COMMISSION
(MBSHC)**

STATE HYDROGRAPHIC SERVICE OF UKRAINE



NATIONAL REPORT OF UKRAINE

**TO THE 24th CONFERENCE
OF THE MEDITERRANEAN AND BLACK SEAS HYDROGRAPHIC COMMISSION
(MBSHC24)**

2024

NATIONAL REPORT OF UKRAINE
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1. Hydrographic Office / Service

General

The State Hydrographic Service of Ukraine (hereinafter – the SHSU) is a national hydrographic office and national lighthouse authority of Ukraine, administered by the State Service for Maritime, Inland Waterway Transport and Shipping of Ukraine (Administration of Shipping) under the Ministry for Communities, Territories and Infrastructure Development of Ukraine.

The main tasks of the SHSU include ensuring Ukraine’s compliance with international obligations of Ukraine as a coastal state under the International Convention for the Safety of Life at Sea, 1974 (SOLAS). These tasks are as follows:

- performing hydrographic surveys of seas and inland waterways in accordance with International Hydrographic Organization (IHO) standards, and processing the collected hydrographic data for its cartographic production or transmission to end-users;
- preparing, compiling, and distributing nautical and river navigational charts, Sailing Directions, Notices to Mariners, and other nautical publications;
- collecting, processing, and disseminating maritime safety information, while also acting as a National Navigational warnings’ Coordinator and a National NAVTEX Service Coordinator;
- providing navigational support of shipping by equipping sea and inland waterways with aids to navigation (AtoN) and ensuring their continuous operation in accordance with the requirements of the International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA);
- developing the navigation and hydrographic support system of shipping by means of implementation of new technologies and technical means in the fields of navigation, hydrography, and cartography.

Due to the occupation of the Autonomous Republic of Crimea and parts of Kherson, Zaporizhzhia, and Donetsk regions by the Russian Federation, the State Hydrographic Service of Ukraine has lacked access to the inland sea waters and territorial sea surrounding the Crimean Peninsula since March 2014, and to the Sea of Azov since February 2022.

The sea ports of Kerch, Sevastopol, Feodosiia, Yalta, Yevpatoriia are closed until the restoration of the constitutional order of Ukraine within the temporarily occupied territory of the Autonomous Republic of Crimea (in accordance with the Order of the Ministry of Infrastructure of Ukraine No. 255 of June 16, 2014).

Updates to the IHO Yearbook as of April 2024.

STATE HYDROGRAPHIC SERVICE OF UKRAINE	
Institution of which the Hydrographic Service is part	Ministry for Communities, Territories and Infrastructure Development of Ukraine State Service for Maritime, Inland Waterway Transport and Shipping of Ukraine (Administration of Shipping)
Principal functions of the H.O.	Hydrographic surveys, oceanography, nautical charts and inland charts in paper and digital form, cells, nautical publications (Notices to Mariners, Sailing Directions, List of Lights etc.), radio navigational warnings, broadcasting of meteorological information, aids to navigation.
National day	24 August
Date of establishment in accordance with national legislation	9 February 1994 In accordance with the Ordinance of the Cabinet of Ministers of Ukraine No. 84 of 9 February 1994
Name and rank of the Director or Head	Captain (N) Oleksandr Boiko
Tonnage	804344 (2022)
Staff employed - Hydrographers (name and rank of managing staff)	Mr Oleh MARCHENKO – Head of the Charting Branch of the State Hydrographic Service of Ukraine
Total number of paper charts published	175 paper nautical navigational charts 176 paper charts for inland waterways
Number of INT charts published Number of ENC cells published	16 238 ENCs 138 ENC cells 195 inland ENCs
Types of publications produced (e.g., Tide Tables, Sailing Directions, List of Lights, etc.)	- <i>Notices to Mariners</i> (in Ukrainian and English) No.907.00 (48/year); - <i>‘Sailing Directions on Ukrainian Waters of the Black Sea and the Sea of Azov’</i> No.101 (in Ukrainian) (2015); - <i>‘Lights and Beacons of the Black Sea and Sea of Azov. Ukrainian coast’</i> No.201 (in Ukrainian) (2022); - <i>‘Regime of Navigation in Ukrainian Waters of the Black Sea and the Sea of Azov (Summary description)’</i> No.402 (in Ukrainian) (2015); - Catalogue <i>‘Nautical charts and publications’</i> No.701 (in Ukrainian and English) (2021); - <i>‘Symbols and abbreviations used on nautical charts’</i> No.902 (in Ukrainian and English) (2023); - <i>‘Description of Maritime Buoyage System in Ukrainian Waters. IALA System. Region A (Red to port)’</i> No.903 (in Ukrainian); (2009); - <i>‘Maritime Buoyage System in Ukrainian Waters. IALA System. Region A’</i> No. 904 (in Ukrainian) (2015);

	<ul style="list-style-type: none"> - ‘<i>Symbols and abbreviations used on inland navigational charts</i>’ No. 908 (in Ukrainian and English) (2023); - ‘<i>Lights and beacons of the Danube River. Kiliiske Mouth Delta to the Prut River Mouth</i>’ No.202 (in Ukrainian) (2011); - ‘<i>Sailing Directions of the Danube River. Kiliiske Mouth Delta to the Prut River Mouth</i>’ No.103 (in Ukrainian) (2006); - ‘<i>Instructions on Requirements and Methods of Depth Contour Survey for Navigation Purposes</i>’ No.933 (in Ukrainian) (2006); - ‘<i>General Provisions on Compiling Notices to Mariners</i>’ No.935 (in Ukrainian) (2006); - ‘<i>Oceanographic atlas of the Black Sea and the Sea of Azov</i>’ No. 601 (in Ukrainian and English) (2009); - ‘<i>The list of current Temporary and Preliminary NtMs of State Hydrographic Service of Ukraine</i>’ No. 910 (in Ukrainian and English) (2024); - ‘<i>Navigational and Reference Tables for Navigators</i>’ No. 909 (in Ukrainian) (2012); - ‘<i>Dnipro River Pilot</i>’ No.105 (2012); - ‘<i>Navigational-Hydrographic Dictionary</i>’ (in Ukrainian and English) (2008); - ‘<i>Cartographic Support for Navigation</i>’ (in Ukrainian) (2013); - ‘<i>Navigational Support of Sailing</i>’ (in Ukrainian) (2014).
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2. Surveys

Coverage of new surveys

The State Hydrographic Service of Ukraine carried out surveys at specific seaports and within the water areas of the Danube and Dnipro rivers in 2022-2023.

The information about detected dangers and changes in navigational conditions is disseminated in the coastal warnings and in the Ukrainian Notices to Mariners.

New technologies and / or equipment

In 2023, two multi-beam echosounders, two single-beam echosounders, and software for conducting surveys and processing hydrographic data were put into operation.

New ships

No new ships have been commissioned into service from 2022 to 2024.

At present, the State Hydrographic Service of Ukraine is in need of a surveying launch and an aids to navigation service vessel, and is considering obtaining these vessels through humanitarian technical assistance or purchasing them.

Challenges and achievements

Eleven hydrographic survey vessels, buoy tenders, and boats of the State Hydrographic Service of Ukraine suffered varying degrees of damage during the russian attacks. In the

Mariupol Section, the aggressor seized a hydrographic survey vessel and a survey boat of the SHSU.

No.	Hydrographic survey vessels and watercraft	Degree of damage to the vessel
1.	Shliahovyk	Damaged due to collision with an unknown explosive device. Repaired.
2.	Kapitan Bashev	Looted and damaged by debris during shelling. Half-flooded. Currently, its condition is unknown.
3.	MZ-304	Looted and damaged by debris during shelling. Half-flooded. Currently, its condition is unknown.
4.	Ivolha	Looted and damaged by debris during shelling. Half-flooded. Currently, its condition is unknown.
5.	Hydrograph-12	Looted and damaged by debris during shelling. Half-flooded. Currently, its condition is unknown.
6.	Hydrograph-5	Two main outboard engines, YAMAHA-115, were stolen from the boat, and the hull and cable routes were damaged.
7.	Puteets-1	Looted and damaged by debris during shelling. Half-flooded. Currently, its condition is unknown.
8.	Loran	The MerCruiser-3.0L main engine was stolen from the boat.
9.	Stryzhen	The vessel sank near the pier during the artillery bombardment in 2022.
10.	Kapitan Ziber	Detained in the territory occupied by the russian federation
11.	UAK-3309-K	Detained in the territory occupied by the russian federation

Due to russian federation's armed aggression against Ukraine since February 2022, the SHSU is unable to carry out surveys in specific areas of the Black Sea and the Sea of Azov.

3. New charts & updates

ENC coverage, gaps and overlaps

In 2023-2024, 18 nautical ENCs covering the water area of the north-western part of the Black Sea and 68 river ENCs for the Danube and Dnipro rivers were updated.

In pursuance of the IHO Resolution 1/2018, which concerns defining the overlapped ENC data significant for navigational safety within the area of its chart production and preventing an increase in the aforementioned cases, the SHSU analyzes and provides the corresponding information to the Region F International Charting Coordinator (ICC).

At present, Ukrainian ENCs have 33 cases of overlapping with ENCs produced by other countries.

The identified overlaps in the Black and Azov Seas have been caused by factors beyond Ukraine's control, as the SHSU exclusively develops, distributes, and updates its official ENC's for Ukraine's jurisdictional area. On February 26, 2024, the Regional Charting Coordinator received information regarding all cases of overlapping in the Ukrainian ENC's, along with risk assessments.

ENC distribution method

As per the agreements concluded with the PRIMAR (Regional ENC Coordinating Centre (RENC)) and the United Kingdom Hydrographic Office (UKHO).

RNCs

The SHSU does not produce RNCs due to the lack of demand for this type of chart.

INT charts

In 2023, 4 INT charts were reissued due to changes in the traffic separation system 'Approaches to the Chornomorsk, Odesa and Pivdennyi Ports'.

In 2024, 1 INT chart was reissued.

National paper charts

68 new editions of river navigational charts for the Danube and Dnipro rivers, along with 20 nautical charts for the north-western part of the Black Sea, have been published.

Other charts, e.g. for pleasure craft

In 2023, 3 general-purpose charts of inland waterways were produced for the Danube and Dnipro rivers.

4. New publications & updates

New publications

No new publications have been issued from 2022 to 2024.

Updated publications

Re-issued:

- No. 201 'Lights and beacons of the Black Sea and Sea of Azov. Ukrainian coast' (2022);
- No. 902 'Symbols and abbreviations used on nautical charts' (2023);
- No. 908 'Symbols and abbreviations used on inland navigational charts' (2023);
- No. 910 'The list of current Temporary and Preliminary NtMs of State Hydrographic Service of Ukraine' (2024).

Means of delivery, e.g. paper, digital

Notices to Mariners are provided on the user's demand and are delivered in both paper and digital forms. All other publications are delivered in paper form.

Charts are provided to users in both paper and digital forms.

5. MSI

Existing infrastructure for MSI dissemination

General supervision over MSI dissemination has been fulfilled by the National Coordinator – the State Hydrographic Service of Ukraine, through its Centre for Navigational and Hydrographic Information operating in Kyiv. Informing mariners on changes in navigational conditions and sailing regime in the sea area of Ukraine is carried out by means of:

- coastal warnings broadcasting in English via International NAVTEX Service at frequencies 518 and 490 kHz;
- coastal warnings broadcasting in the radiotelephony mode at frequency 2650 kHz (temporarily suspended since May 2022);
- transmission to ship-owners and mariners via the Internet of daily Bulletins of the latest navigational information, including texts of coastal warnings for the past 24 hours, current coastal warnings and NAVAREA III navigational warnings for 031 region (the Black Sea and the Sea of Azov), 24-hour weather forecast, ice conditions, storm warnings for the past 24 hours, as well as other information concerning the safety of navigation. Coastal warnings (navigational information) in NAVTEX mode are transmitted by Odesa NAVTEX Coastal Station.

Coastal warnings (navigational information) in NAVTEX mode are broadcasted by Odesa NAVTEX Coastal Station.

Coastal warnings are transmitted on schedule only for their operative range, while vital and important coastal warnings (including information about distresses, drifting mines and storm warnings) are transmitted out of schedule.

The SHSU posts the Maritime Safety Information (MSI) in its official website. The Coastal Warnings in force are currently available in the MSI Section of the SHSU site –

http://hydro.gov.ua/?page_id=144

Contact Details for the National Coordinator of Ukraine:

COUNTRY	TELEPHONE	FAX	EMAIL
UKRAINE	+380 44 292 41 20	+380 44 292 41 20	navigation@hydro.gov.ua navtexukr@gmail.com Web: http://hydro.gov.ua

NAVTEX Coastal Stations Contact Details:

Country	NAVTEX stations	Telephone	Fax	Email	Status
UKRAINE	Berdiansk [G] [U]	Non-operational due to the russian federation's occupation			
	Odesa [C] [X]	+380 48 753 17 53 +380 48 746 80 87 +380 50 490 15 47	+380 48 773 18 72	cngi@hydro.od.ua	operational

Statistics on work of the National Coordinator

During the 2023-2024 period, 215 Coastal Warnings and 2016 Meteorological Warnings (including weather forecasts, storm warnings and ice conditions) were broadcasted, while 7 warnings were delivered to the NAVAREA III Coordinator (Cadiz, Spain).

New infrastructure in accordance with GMDSS Master Plan

There have been no changes since 2021.

GMDSS	
Master plan	Yes
A1 Area	Yes
A2 Area	Yes
A3 Area	No
NAVTEX	Yes
SafetyNET	No

Challenges and achievements

On May 12, 2022, russian federation occupation troops invaded the territory of the Berdiansk Lower Lighthouse (Berdiansk city area) and forcibly disconnected the Berdiansk NAVTEX Coastal Station. As a result, Ukraine is unable to broadcast MSI via the Berdiansk NAVTEX Coastal Station to its area of responsibility for MSI distribution (areas of the Sea of Azov and the Kerchenska Strait).

Consequently, between 2022 and 2024, numerous violations by the russian federation of Ukraine's areas of responsibility for MSI transmission were recorded. Specifically, these violations included the coastal warnings broadcasting via the Novorossiysk NAVTEX station (518 kHz) and the Taganrog NAVTEX station (490 kHz) for Ukraine's areas of responsibility (the north-western part of the Black Sea, areas adjacent to the Autonomous Republic of Crimea, the Sea of Azov and the Kerchenska Strait).

At the same time, the IMO NAVTEX Coordinating Panel has agreed the usage of the Odesa NAVTEX Coastal Station to broadcast MSI to the waters of the Sea of Azov, aiming to replace the disconnected Berdiansk NAVTEX Coastal Station. The State Hydrographic Service of Ukraine has implemented measures to increase the transmitter power of the Odesa NAVTEX Coastal Station, for the sake of ensuring coverage of the Sea of Azov to fulfill the international obligations of Ukraine under the International Convention for the Safety of Life at Sea (SOLAS), despite the continued occupation of the coast and waters of the Sea of Azov by the russian federation.

6. C-55

The table below describes the hydrographic surveys for the depth ranges 0-200m and > 200m (-- /--) out to the limits of Exclusive Economic Zone:

A – properly surveyed; **B** – re-surveying required;

C – never systematically surveyed.

Nation	A	B	C	Additional notes including significant gaps in coverage
Ukraine	75%/100%	25%/0%	0%/0%	<p>The russian federation occupies most of Ukraine’s territorial sea and exclusive (maritime) economic zone.</p> <p>The destruction of the Kakhovska Hydroelectric Power Station by the russian federation has led to the spreading of significant debris from destroyed objects throughout the Black Sea, posing potential navigational hazards. Additionally, military operations in the north-western part of the Black Sea have resulted in an increased presence of mines. As a result, the water areas requiring resurveying may be substantially larger by square.</p>

The latest update on the status of Ukrainian charts coverage within the area of responsibility of Ukraine in the International Charting Region F is as follows:

Nation	Offshore passage/ Small			Coastal passage/ Medium			Approaches and ports/ Large			Additional notes
	A	B	C	A	B	C	A	B	C	
Ukraine	100%	-	100%	100%	-	100%	100%	-	100%	Ukraine does not produce RNCs.

Nation	MSI	
Ukraine	Local warnings	Yes
	Coastal warnings	Yes
	NAVAREA warnings	Yes
	Information about ports	Yes

7. Capacity Building

Offer of and/or demand for Capacity Building

The State Hydrographic Service of Ukraine is seeking additional ways of personnel training, in particular by means of participation of the SHSU hydrographic surveyors, cartographers in various specialized courses conducted under the auspices of the International Hydrographic Organization (IHO).

Training received, needed, offered

In 2022, hydrographic surveyor Maksym Zavarzin successfully completed the Category “B” Hydrographic Survey Programme held at the Korea Hydrographic and Oceanographic Agency (KHOA), Busan, Republic of Korea (ROK).

Throughout 2023-2024, the representatives from the SHSU have been participating in the training courses organized by the RENC PRIMAR (Norway) concerning the special use of S-100/S-101 standards (3 employees).

Ivan Zakharov, the Head of the Centre of Navigational and Hydrographic Information at the SHSU, participated in the Workshop on MSI Development & Implementation from May 7th to May 9th, 2024.

Pavlo Ivanov, a cartographer at the Charting Branch of the SHSU, attended the ENC Quality and Conversion Training from May 20th to May 24th, 2024.

Pavlo Ivanov has also been selected to participate in the Geospatial Marine Analysis and Cartography (GEOMAC) Project, scheduled to commence on July 15th, 2024. Moreover, Dmytro Mazin, an SHSU employee, is scheduled to participate in the Category “B” Hydrographic Survey Programme in 2024.

Status of national, bilateral, multilateral or regional development projects with hydrographic component. (In progress, planed, under evaluation or study)

The State Hydrographic Service of Ukraine has concluded agreements that are currently in force for exchanging navigational information with the United Kingdom Hydrographic Office (UKHO).

Additionally, agreements have been signed with RENC PRIMAR (Norway) and the UKHO for the ENCs distribution.

Definition of proposals and requests to the IHO CBSC

The State Hydrographic Service of Ukraine is seeking training opportunities for its personnel in the following areas:

Short-term courses:

- Workshop on MSI Development & Implementation (1 employee)
- S-100 Production Course (S-57 to S-101 Conversion) (1 employee)
- ENC Quality and Conversion Training (1 employee)

Long-term courses: Category “B” Hydrographic Survey Programme (1 employee)

8. Oceanographic activities

Oceanographic activities in the Black Sea and the Sea of Azov have been suspended since 2022 due to russian aggression.

Tide gauge network

The State Hydrographic Service of Ukraine operates automatic tide gauges designed for continuous monitoring of sea level on the coast of the Black Sea.

Furthermore, the network of tide gauge stations is utilized by the Ukrainian Hydrometeorological Center of the State Emergency Service of Ukraine (UkrHMC).

New equipment

No new equipment has been acquired from 2022 to 2024.

9. Spatial data infrastructure

In 2020, the Act of Ukraine ‘On National Spatial Data Infrastructure’ came into force, stipulating the involvement of the State Hydrographic Service of Ukraine in the development and updating of geospatial datasets.

The SHSU collaborates with the State Service of Ukraine for Geodesy, Cartography, and Cadastre to fulfill the requirements of the aforementioned Act within its jurisdiction.

10. Innovation

Use of new technologies

In 2023, a representative from the State Hydrographic Service of Ukraine successfully completed the IALA Waterway Risk Assessment Program (IWRAP MK II) offered by the IALA World-Wide Academy. Up to the moment, five employees of the SHSU in total have undergone training through this course provided by the IALA World-Wide Academy.

Utilizing the acquired risk assessment skills, SHSU representatives have contributed to the development of amendments to the traffic separation system in the north-western part of the Black Sea.

In 2023, Teledyne CARIS software for the production of paper charts and ENCs was implemented by SHSU.

11. Other activities

Participation in IHO meetings

The State Hydrographic Service of Ukraine is involved in the activities of the corresponding IHO Regional Hydrographic Commission (RHC) and the Working Group subordinate to it, namely the Mediterranean and Black Seas Hydrographic Commission (MBSHC) and the Black and Azov Seas Working Group (BASWG). On March 26-27, 2024, the SHSU team participated in a regular BASWG meeting.

Meteorological data collection

The State Hydrographic Service of Ukraine and the Ukrainian Hydrometeorological Center have concluded agreements concerning usage of meteorological and hydrological information for the Black Sea and inland waterways.

Engagement with the Maritime Administration

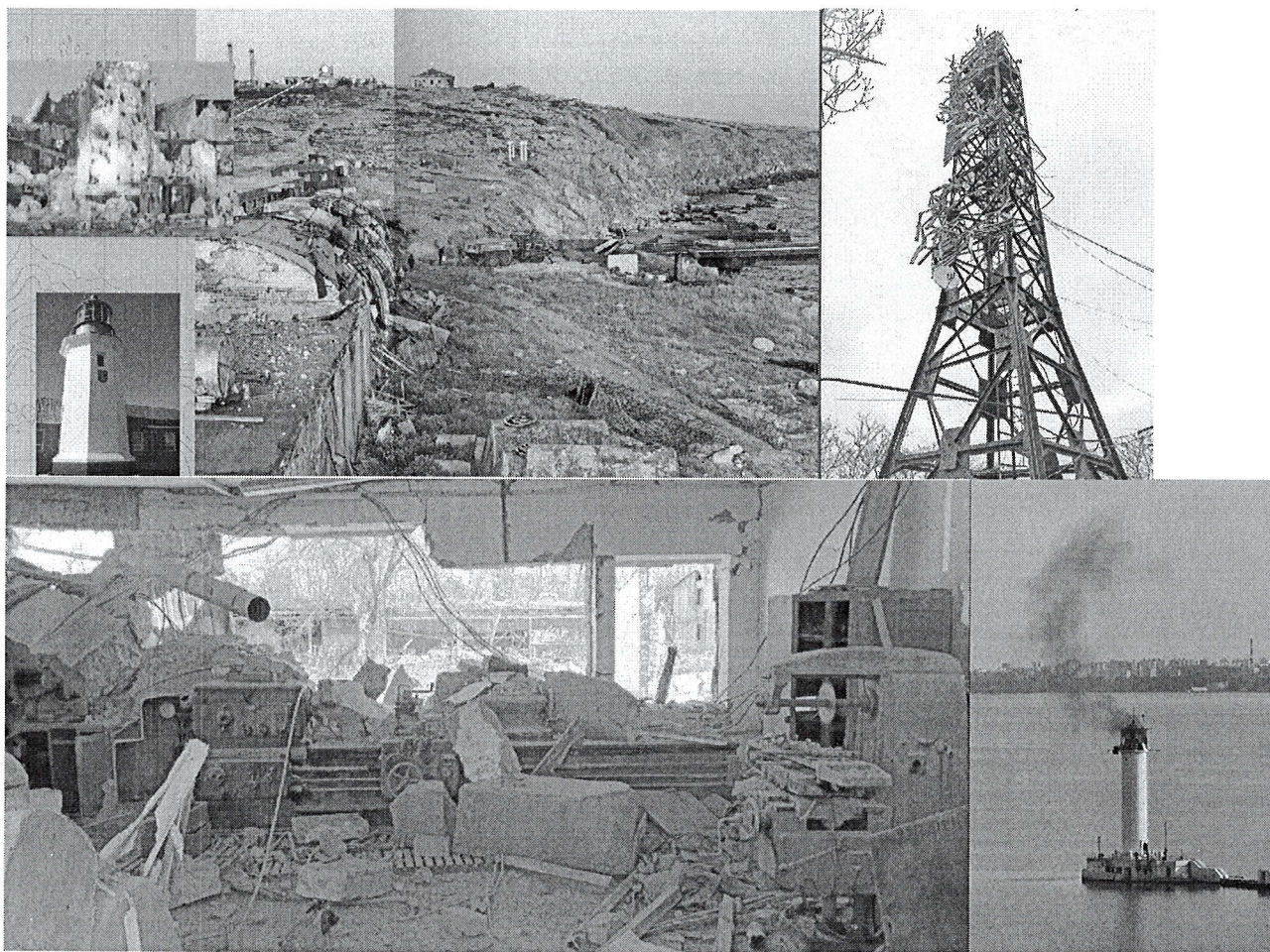
The State Hydrographic Service of Ukraine closely collaborates with the State Service for Maritime, Inland Waterway Transport and Shipping of Ukraine (Administration of Shipping), which is serving as the governing body for the SHSU concerning hydrography, charting, MSI broadcasting and navigation support for shipping.

The SHSU analyzes information and draws conclusions regarding the possibility of constructing facilities along coastal and sea areas, which could affect the established operation of aids to navigation (AtoN) or pose navigational hazards. Furthermore, the SHSU collaborates on matters concerning informing the mariners about changes in navigational conditions and sailing regime, changes to established ships' routing systems, and the development of regulatory and legislative documents related to navigational safety.

Aids to Navigation matters

The State Hydrographic Service of Ukraine ensures navigational support for shipping by equipping sea and peculiar inland waterways with aids to navigation (AtoN) following IALA requirements.

The SHSU is responsible for operating and maintaining AtoN, including both coastal (lighthouses, lighted beacons) and floating aids to navigation.



Due to Russia's military aggression against Ukraine, certain AtoNs have been damaged. The Zmiinyi Island Lighthouse and its infrastructure were completely destroyed.

Moreover, a considerable number of AtoNs, maintenance facility and other essential buildings for AtoN maintenance along the Ukrainian coast have been severely damaged.

Due to the occupation of part of the territory of Ukraine by the Russian Federation, aids to navigation along the coastline of the Crimean Peninsula, the Sea of Azov, the Karkinitzka Gulf and the port of Skadovsk are currently beyond the control of the SHSU.

International engagements

The State Hydrographic Service of Ukraine actively engages in the activities of committees and sub-committees, working groups of IMO, IALA, Danube Commission within its area of responsibility. The SHSU is responsible for carrying out hydrographic activities to fulfill the obligations of the Mixed Ukrainian-Romanian Border Commission.

12. Conclusions

Due to the armed aggression of the Russian Federation against Ukraine, navigation and hydrographic support activities have been carried out under martial law conditions since February 2022, following the Decree of the President of Ukraine 'On Imposing Martial Law in Ukraine' on 24 February 2022 No. 64/2022, approved by the Act of Ukraine on 24 February 2022 No. 2102-IX.

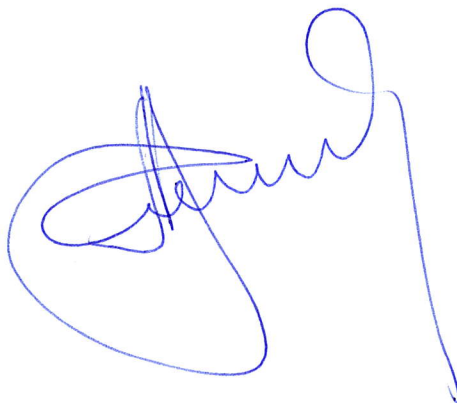
The SHSU carries out hydrographic surveys of inland waterways (the Dnipro, Danube and Pivdennyi Buh rivers) in order to issue and update the river navigational charts.

Russia's military aggression against Ukraine has made it impossible for Ukraine to fulfill its international obligations of a coastal state in terms of hydrographic support in accordance with the SOLAS requirements in the Sea of Azov. Moreover, it has significantly limited fulfillment of these obligations in the north-western part of the Black Sea.

Date: 6 May 2024

Signature:

Head of the SHSU, Captain (N)

A handwritten signature in blue ink, appearing to be 'Oleksandr Boiko', written in a cursive style.

Oleksandr BOIKO