

BASWG15

**BLACK and AZOV SEAS WORKING GROUP
(BASWG)**

STATE HYDROGRAPHIC SERVICE OF UKRAINE



NATIONAL REPORT OF UKRAINE

**TO THE 15th MEETING
OF THE BLACK AND AZOV SEAS
WORKING GROUP
(BASWG15)**

NATIONAL REPORT OF UKRAINE

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1. Hydrographic Office/Service

a. *General*

The State Hydrographic Service of Ukraine (SHSU) is a national hydrographic office established within the framework of the Ministry of Infrastructure of Ukraine, while the State Service for Maritime and River Transportation of Ukraine performs surveillance over the navigational and hydrographic support of shipping.

The main tasks of the SHSU are as follows:

- Fulfillment of international commitments of Ukraine pertaining to the safety of navigation, in particular hydrographic surveying of oceans and seas in accordance with the IHO standards, provision of the seas and inland waterways within zone of responsibility of Ukraine with AtoNs, their maintenance and ensuring of continuous operation in conformity with the IALA requirements;
- Compilation and distribution of nautical and inland navigational charts, Sailing Directions, Notices to Mariners, other nautical publications;
- Acting as a national navigational warnings coordinator and a National NAVTEX Service Coordinator in Ukraine;
- Development of the AtoN system by means of implementation of new methods, techniques and technologies in the fields of navigation, hydrography and cartography;
- Lighthouses renovation involving the energy-saving technologies (solar batteries, wind power stations, LEDs etc.), modernization of floating AtoNs through use of plastics, flasher mechanisms with LED modules and implementation of the Automatic Identification System (AIS);
- development and maintenance of the uniform system of hydrographic support of navigation in the seas and inland waterways of Ukraine.

Due to the Russian Federation's occupation and annexation of the part of Ukrainian territory, from March 2014 the SHSU doesn't have access to Ukraine's inland waters and territorial sea in the area of Crimean Peninsula. Aids to navigation on the Crimean coast have been temporarily out of the SHSU's control. Mariners are requested to exercise caution.

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

In compliance with the Law of Ukraine No 1207-VII of 15 April 2014 'On Securing the Rights and Freedoms of Citizens and the Legal Regime on the Temporarily Occupied Territory of Ukraine', inland waterways and territorial sea of Ukraine around Crimean Peninsula, as well as the territory of exclusive (maritime) economic zone of Ukraine along Crimean coastline have been defined as temporarily occupied territories.

The United Nations General Assembly Resolutions A/Res/68/262 of 27 March 2014 "Territorial

integrity of Ukraine”, A/Res/71/205 of 19 December 2016 “ Situation of Human Rights in the Autonomous Republic of Crimea and the city of Sevastopol (Ukraine)”, A/Res/72/190 of 19 December 2017 “Situation of Human Rights in the Autonomous Republic of Crimea and the city of Sevastopol, Ukraine”, A/Res/73/194 of 17 December 2018 “Problem of the Militarization of the Autonomous Republic of Crimea and the City of Sevastopol, Ukraine, as well as parts of the Black Sea and the Sea of Azov”, and A/Res/73/263 of 22 December 2018 “Situation of Human Rights in the Autonomous Republic of Crimea and the city of Sevastopol, Ukraine” have confirmed the unchanged status of the territorial integrity of Ukraine within its internationally recognized boundaries and also call upon “all international organizations and specialized agencies of the United Nations system, when referring to Crimea in their official documents, communications and publications, including with regard to statistical data of the Russian Federation, to refer to “the Autonomous Republic of Crimea and the city of Sevastopol, Ukraine, temporarily occupied by the Russian Federation”, and encourages all States and other international organizations to do the same”.

- b. *Updates for the IHO Yearbook, e.g. reorganization (please, see below the updates to the IHO Yearbook as of April 2021; all updates are in **red bold**)*

STATE HYDROGRAPHIC SERVICE OF UKRAINE 23, Gagarina Avenue Kyiv 02094 UKRAINE	
Department of which the Hydrographic Office is part	Ministry of Infrastructure of Ukraine
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.), broadcasting of meteorological information , radio navigational warnings, aids to navigation.
National day	24 August
Telephone: Fax: E-mail:	+38 (044) 296 60 40 +38 (044) 292 12 17 office@hydro.gov.ua
Date of establishment and Relevant National Legislation	February 9, 1994 Ordinance of the Cabinet of Ministers of Ukraine No 84 of February 9, 1994
Name and rank of the Director or Head	Mr Sergiy SANIN, Head
Tonnage	2017 = 496 423
Staff employed - Hydrographers (Name and rank of managing staff)	Mr. Anatoliy SHEMELIN Deputy Head Mr. Oleg Marchenko – Head of <i>Ukrmorcartographia</i> (the charting branch of the State Hydrographic Service of

	Ukraine)
№ of charts published	175 paper nautical navigational charts 153 paper charts for inland waterways
№ of INT charts published	16
№ of ENC cells published	239 ENCs 429 138 ENC cells 476 173 inland ENCs
Type of publications produced (e.g.; Tide Tables, Sailing Directions, List of Lights etc.)	<ul style="list-style-type: none"> - Notices to Mariners (in Ukrainian and English) No.907.00; - ‘Sailing Directions on Ukrainian Waters of the Black Sea and the Sea of Azov’ No.101 (in Ukrainian); - ‘Lights and Beacons of the Black Sea and Sea of Azov’ No.201 (in Ukrainian); - ‘Regime of Navigation in Ukrainian Waters of the Black Sea and the Sea of Azov’ (summary description) No.402 (in Ukrainian); - Catalogue ‘Nautical Charts and Publications’ No.701 (in Ukrainian and English); - ‘Nautical Charts Symbols’ No.902 (in Ukrainian and English); - ‘Description of Maritime Buoyage System in Ukrainian Waters. IALA System. Region A’ No.903 (in Ukrainian); - ‘Maritime Buoyage System in Ukrainian Waters. IALA System - Region A’ No. 904 (in Ukrainian); - ‘Symbolology for Inland Waterways Charts’ No. 908 (in Ukrainian, English and Russian); - ‘Lights and Beacons of the Danube River. Kiliiske Mouth Delta to the Prut River Mouth’ No.202 (in Ukrainian and Russian); - ‘Sailing Directions of the Danube River. Kiliiske Mouth Delta to the Prut River Mouth’ No.103 (in Ukrainian and Russian); - ‘Instructions on Requirements and Methods of Bottom Features Surveying for Navigational Purposes’ No.933 (in Ukrainian); - ‘Regulation on Aids to Navigation on the Inland Waterways, in the Territorial Sea and Exclusive (Maritime) Economic Zone of Ukraine’ No.937 (in Ukrainian); - ‘General Provisions for Compilation of Notices to Mariners’ No.935 (in Ukrainian); - ‘Oceanographic Atlas of the Black Sea and the Sea of Azov’ No. 601 (in Ukrainian and English); - ‘The List of Current Temporary and Preliminary NtMs of State Hydrographic Service of Ukraine’ No. 910 (in Ukrainian and English), 2021; - ‘Navigational and Reference Tables for Navigators’ No. 909 (in Ukrainian); - ‘Dnipro River Pilot’ No.105;

	<ul style="list-style-type: none"> - <i>Navigational-Hydrographic Dictionary</i> (in Ukrainian, English and Russian); - <i>'Charting Support for Navigation'</i> (in Ukrainian); - <i>'Navigational Support of Sailing'</i> (in Ukrainian); - <i>'Nautical Hydrography'</i> (in Russian); - <i>'Oceanography'</i> (in Russian); - <i>'Navigational Hydrometeorology'</i> (in Russian). 		
Surveying vessels / Aircraft	Displacement	Date Launched	Crew
GS – 82	807.0	1969	23
GS – 273 *	713.0	1972	23
A. LYSENKO	52.7	2003	4
A. SOLODUNOV	52.7	2005	4
V. ZARUDNIY *	53.0	2006	4
ODESA *	320.0	2007	10
SHLIAHOVYK	92.0	2010 (remanufactured)	6
BGK-334	127	1974	11
KAPITAN ZIBER	133	2015 (remanufactured)	7
KAPITAN BASHEV	133	2014 (remanufactured)	6
KAPITAN CHEREMNYKH	133	2017 (remanufactured)	6
MGK-catamaran *	2.5	2013	2
MGK-catamaran	2.5	2013	2
MGK-catamaran	2.5	2014	2
MGK-catamaran	2.5	2014	2
MGK-catamaran	2.5	2014	2
* Temporarily detained in the occupied territory.			

2. Surveys

a. *Coverage of new surveys*

Within Ukrainian zone of responsibility the SHSU routinely performs hydrographic surveys in the water areas of commercial ports, approaches to ports, places of anchorage and areas of high-density vessel traffic.

The hydrographic surveys at scales of 1:5 000 and 1:1 000 were performed in 2020 in the water areas of Buzko-Dniprovsko-Lymanskyi channel, Khersonskyi sea channel, Spaskyi channel, sea approach channel to Bystre Mouth, water areas and approach channels to the sea ports of Odesa, Chornomorsk (also, the fishing port), Mykolaiv (also, the river port), Yuzhnyi, Khersonskyi, Dnipro-Buzkyi, Bilhorod-Dnistrovskyi, Ochakiv port, as well as the Olviia Stevedoring Company.

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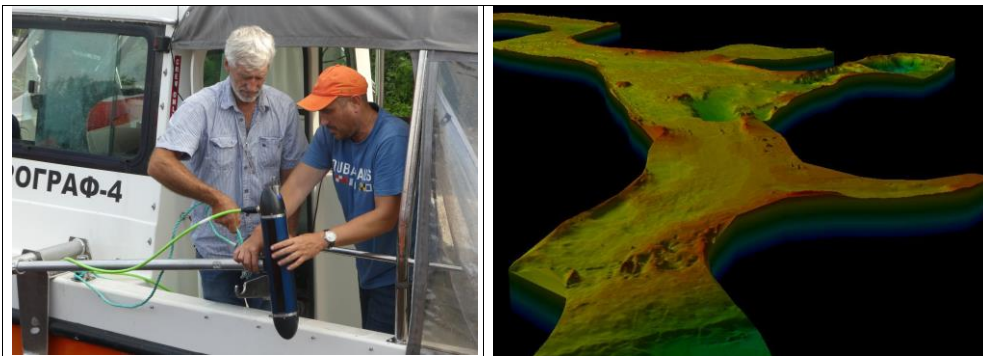
For reissuing of nautical navigational and inland charts and preparation for issuing of ENC cells in compliance with the IHO standards, in the years 2019-2020 it was carried out the hydrographic surveys:

- in the areas of the traffic separation scheme “Approaches to the Chornomorsk, Odesa and Pivdennyi Ports” (parts 3, 4, 5, 6, 7);
- in the water areas of anchorages on approaches to the sea ports of Chornomorsk, Pivdennyi and Odesa;
- in the water areas of the recommended route No 1 from the Pivdennyi Port to the sea port of Odesa;
- in the fairway of the Ukrainian part of the Danube river from the Reni port to the mouth through the Kiliiske Mouth and Bystre Mouth;
- in some sections of the Pivdennyi Buh River from Voznesensk to Mykolaiv;
- in some sections of the navigable pass of the Dnipro river, within the Kyivske, Kremenchutske, Dniprovske, Kamianske and Kakhovske Reservoirs;
- in the stretch of the Prypiat river from the state border with Belarus to the mouth;

in the dumping ground areas on approaches to the ports of Chornomorsk, Pivdennyi and Odesa. The State Hydrographic Service of Ukraine routinely fulfils examination of sunken wrecks and other navigational dangers. The information about detected dangers and changes in navigational conditions is disseminated in the coastal warnings and in the Ukrainian Notices to Mariners.

b. New technologies and/or equipment

The SHSU uses the multi-beam echosounder systems to meet the needs in hydrographic surveying of the coastal waters of Ukraine, port water areas, navigable waterways and areas with minimum depths.



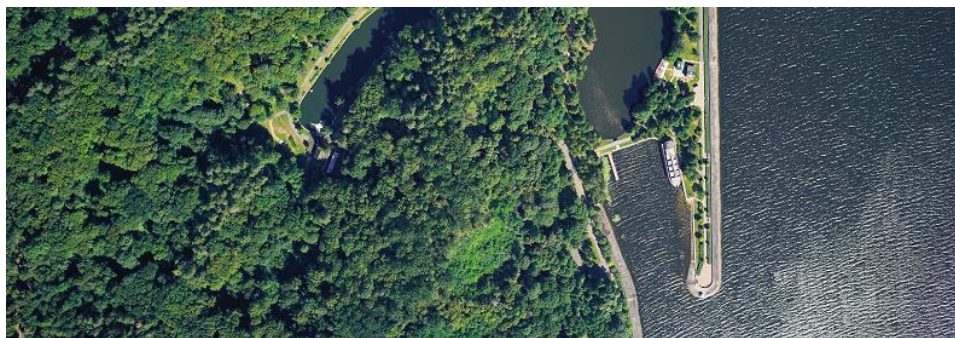
Interferometer echosounder 3DSS-iDX-FULL entered into service in 2020

The interferometer echosounder 3DSS-iDX-FULL by Ping DSP that was placed in service in 2020, is intended for hydrographic surveys in shallow waters and in inland waterways.

Unmanned aerial vehicles (UAV) manufactured in Ukraine have been used for coastal surveys since 2019.



The UAVs' main purpose is to perform real-time monitoring, data collection and analysis, charting of terrain alterations (data acquisition for the Earth remote sensing), as well as compilation of ortophotomaps, digital terrain models for Ukrainian inland waterways and surrounding areas, with a view to further update charting products in required scales.



Photogrammetric plotting of the received data is carried out by means of own soft- and hardware in the specialized software.

The segment of aerial survey of the Kyivske Reservoir (June 2020)

The hydrographic surveying and data processing are fulfilled using the HYPACK and HYSWEEP software.

To perform coastal surveys, two new geodetic systems Trimble R8s and a total station were purchased in the period of 2019-2020.

c. New ships

NtR

d. Problems encountered

The State Hydrographic Service of Ukraine is not able to carry out hydrographic surveys in the area of the Crimean Peninsula due to the occupation of the Autonomous Republic of Crimea and the City of Sevastopol by the Russian Federation.

3. New Charts & Updates

a. *ENCs*

30 updated ENCs
 93 updated river navigational charts.
 9 new ENC cells in the Usage Band 5

ENC schemes are included to Annex A.

№	Usage Band / Scale Category	Released ENC Cells	Target	Coverage %
1.	Overview	2	2	100.00%
2.	General	6	6	100.00%
3.	Coastal	32	32	100.00%
4.	Approach	37	37	100.00%
5.	Harbour	61	61	100%
6.	Berthing	-	19	0%

b. *ENC distribution method*

Distribution Agreements with PRIMAR and UKHO.

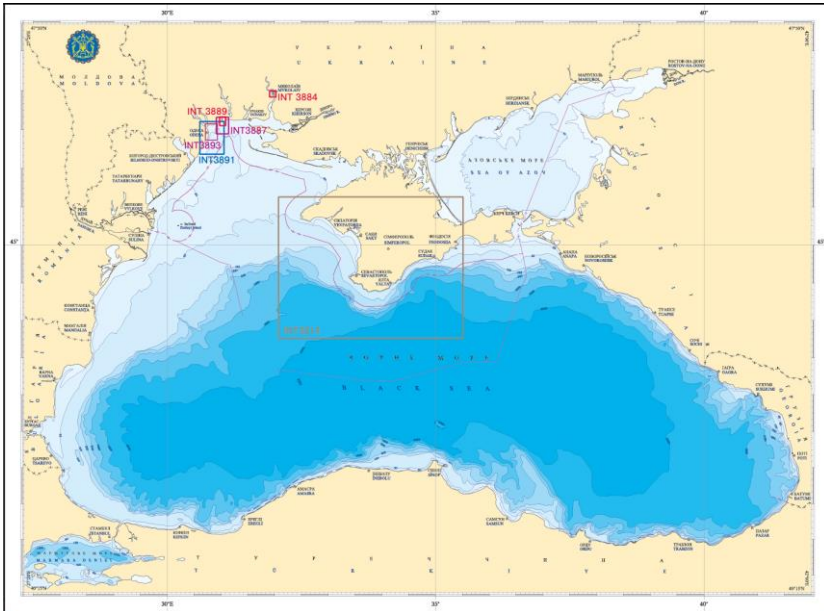
c. *RNCs*

The SHSU does not produce RNCs.

d. *INT Charts*

The following international (INT) charts were updated in 2020;

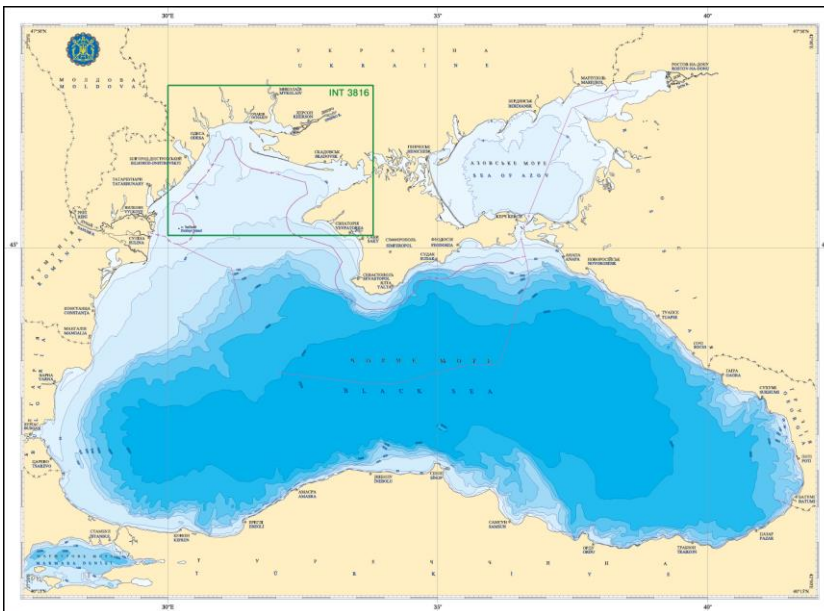
№ 3502 INT3887 "Approaches to Pivdennyi Port", scale 1:25 000
 № 3605 INT3889 "Pivdennyi Port", scale 1:12 500
 № 3615 INT3884 "Mykolaiv Port", scale 1:10 000
 № 3503 INT3893 "Approaches to Odesa Port", scale 1:25 000
 № 3407 INT3891 "Approaches to Odesa, Chornomorsk and Pivdennyi Ports", scale 1:75 000
 № 3227 INT3814 "Tarkhankut Cape to Ilii Cape", scale 1:300 000



INT charts updated in 2020

It has been scheduled work on the following INT charts to be updated in 2021:

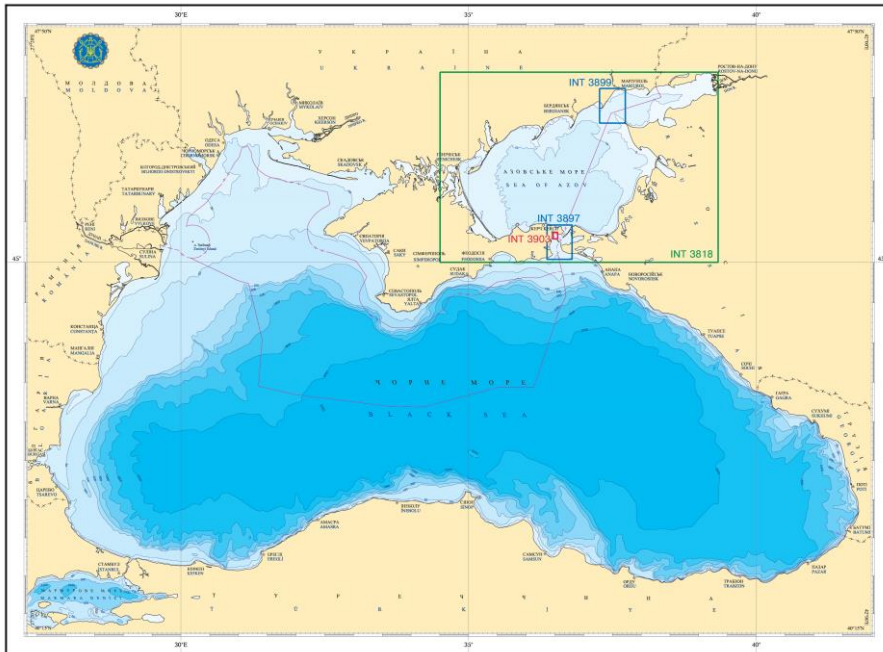
№ 3226 INT3816 "Zmiinyi Island to Tarkhankut Cape", scale 1:300 000



INT charts to be updated in 2021

4 more INT charts have been under consideration of the Region F Coordinator:

3417	3897	UA	50 000	Kerchenska Strait
3421	3899	UA	50 000	Approaches to Mariupol Port
3632	3903	UA	10 000	Kerch Port
3229	3818	UA	350 000	Sea of Azov



INT charts being under consideration of the Region F Coordinator

e. National paper charts

- Set of river navigational charts of the Dnipro River No. 3528 “Nyzhnii Dnipro from Kakhovska Hydroelectric Power Station to the Mouth” (11 sheets)
- Set of river navigational charts of the Dnipro River No. 3529 “Kakhovske Reservoir from Dniprovska Hydroelectric Power Station to Kakhovska Hydroelectric Power Station” (15 sheets)
- Set of river navigational charts of the Dnipro River No. 3532 “Kremenchutske Reservoir from Kanivska Hydroelectric Power Station to Kremenchutska Hydroelectric Power Station” (12 sheets)
- Set of river navigational charts of the Pivdennyi Buh River No. 3540 “Pivdennyi Buh River from Voznesensk to Mykolaiv” (23 sheets)
- Set of river navigational charts of the Dnipro River No. 3530 “Dniprovske Reservoir from Serednodniprovska Hydroelectric Power Station to Dniprovska Hydroelectric Power Station and Samara River from Novomoskovsk to the Mouth” (22 sheets)
- 3001 "Black Sea and Sea of Azov"
- 3101 "Black Sea. Western Part"
- 3102 "Black Sea. Eastern Part"

- 3201 "Odesa to Brațul Sulina"
- 3204 "Sevastopol to Tarkhankut Cape"
- 3205 "Sevastopol to Mehanom Cape"
- 3227 "Tarkhankut Cape to Illi Cape"
- 3301 "Sevastopol to Yalta"
- 3304 "Eastern Part of Tahanrozka Gulf"
- 3320 "Kerchenska Strait"
- 3402 "Approaches to Odesa, Chornomorsk and Pivdennyi Ports"
- 3403 "Pivdennyi Port to Ochakiv Port"
- 3407 "Approaches to Odesa, Chornomorsk and Pivdennyi Ports"
- 3414 "Approaches to Gura Sulina"
- 3417 "Kerchenska Strait"
- 3418 "Approaches to Henichesk Portpoint"
- 3425 "Prymorsko-Akhtarsk to Yasenskaia Pereprava with Beisugskiy Firth"
- 3432 "Kalamitska Gulf"
- 3441 "Chauda Cape to Kyz-Aul Cape"
- 3502 "Approaches to Pivdennyi Port"
- 3503 "Approaches to Odesa Port"
- 3520 "Tamanska Gulf"
- 3522 "Approaches to Kerch Port"
- 3605 "Pivdennyi Port"
- 3611 "Karadzhynska and Kipchak Bays"
- 3615 "Mykolaiv Port"
- 3621 "Sudatska Bay"
- 3623 "Komysh-Burunska Bay to Kerchenskyi Approach Channel"
- 3629 "Rybatska (Holuba), Gelendzhyska, Vulcan Bays and Mouth of Mezyb River"
- 3632 "Kerch Port"

f. Other charts, e.g. for leisure craft

Charts of the inland waterways:

- 3028 "Dnipro River from Kakhovska Hydroelectric Power Station to the Mouth"
- 3029 "Kakhovske Reservoir"
- 3030 "Dniprovsk Reservoir"
- 3032 "Kremenchutske Reservoir"
- 3033 "Kanivske Reservoir"
- 3040 "Pivdennyi Buh River"

4. New publications & updates

a. New publications

NtR

b. Updated publications

Re-issued:

- No. 910 'List of Current Temporary and Preliminary Notices to Mariners (NtMs) of the State Hydrographic Service of Ukraine' (2021).

c. Means of delivery, e.g. paper, digital

Publications are delivered in paper form.

Notices to Mariners are provided on the users' requests either in paper or in digital form.

The technology "Print-on-Demand" has been implemented for production, maintenance and dissemination among users of all paper navigational charts from national portfolio.

The Ukrainian Notices to Mariners (NtMs) Database published in Ukrainian and English is currently available at the official SHSU website: Cartographic safety > Notices to Mariners > Ukrainian NtM Database: http://charts.gov.ua/pm_arhive_en.htm

5. MSI

a. Existing infrastructure for transmission

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 regime of navigation in the sea area of Ukraine is carried out by means of:

- broadcasting of coastal warnings in English via NAVTEX at frequencies 518 and 490 kHz;
- broadcasting of coastal warnings in English and Russian via radiotelephone at frequency 2650 kHz;
- transmission to ship-owners and mariners via 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 safety of navigation;
- dissemination of Notices to Mariners.

Coastal warnings (navigational information) in NAVTEX mode are transmitted by **Odesa-NAVTEX** and **Berdiansk-NAVTEX stations**.

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 en force are currently available in the MSI Section of the SHSU site –

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

614 Coastal Warnings and 2424 Meteorological Warnings (including weather forecasts, storm warnings and ice conditions) were broadcasted, while 11 warnings were delivered to the NAVAREA III Coordinator (Instituto Hidrografico de la Marina, Cadiz, Spain).

Operational Point of Contact for Ukraine's National Co-ordinator within the NAVAREA:

COUNTRY	TELEPHONE	FACSIMILE	EMAIL
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UKRAINE	+380 44 292 41 20 +380 50 411 84 73	+380 44 292 41 20	navtex@ukr.net navtexukr@gmail.com navigation@hydro.gov.ua Web: http://hydro.gov.ua
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NAVTEX Coverage:

Country	NAVTEX Stations	Telephone	Fax	Email	Status
UKRAINE	Berdiansk [G] [U]	+380 50 411 20 13 +380 6153 372 29	+38 0629 40 78 58	mayak1878@gmail.com	operational
	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

Nation/Area	Service MSI		GMDSS	
Ukraine	a. Local warnings	Yes	a. Master plan	Yes
	b. Coastal warnings	Yes	b. A1 Area	Yes
	c. Navarea warnings	Yes	c. A2 Area	Yes
	d. Information about ports	Yes	d. A3 Area	No
			e. NAVTEX	Yes
			f. SafetyNET	No

Diagram of NAVTEX stations and International NAVTEX Service Areas in the Black and Azov Seas.



The SHSU has established and currently operates 16 AIS base stations.

Implementation of the automated system for navigational situation monitoring in Ukrainian waters has allowed to the State Hydrographic Service of Ukraine to complete the following tasks:

- to broadcast differential corrections from Differential Reference Stations via AIS channels;

- to broadcast vital NAVTEX navigational warnings, distress and disasters alerts and storm warnings via AIS channels;
- to use AIS as AtoN.

b. New infrastructure in accordance with GMDSS Master Plan

NtR

c. Problems encountered

In October 2018, in the framework of the International Maritime Organization, Ukraine expressed its protest to the Russian Federation in connection with the unauthorized expansion by the Novorossiysk NAVTEX station of its service area into the Sea of Azov and the Kerchenska Strait in spite of the fact that the specified sea areas do not belong to the service area of this radio station. Such unilateral actions of the Russian Federation violate the procedure outlined in the Revised NAVTEX Manual (MSC.1/Circ.1403/Rev.1, paragraph 4.2.9.2).

The violations of the procedures envisaged by IMO MSC.1/Circ.1403/Rev.1 from the side of the Russian Federation have been evidenced in the National Report of the Russian Federation submitted to the MBSHC20. In particular, page 26 of the aforementioned National Report of the Russian Federation contains the Scheme of Coastal Warnings Broadcasting by the Novorossiysk NAVTEX that covers, among others, the coastal areas adjacent to the Crimean Peninsula in the Black Sea and the Sea of Azov and the Kerchenska Strait. Meanwhile, the areas of the Sea of Azov and the Kerchenska Strait belong to the service area of the Ukrainian Berdiansk NAVTEX station, whereas the north-western part of the Black Sea, together with the western coast of the Crimean Peninsula – to the service area of the Ukrainian Odesa NAVTEX station.

In November 2019, Ukraine informed the IMO NAVTEX Coordinating Panel that the situation regarding service areas has significantly deteriorated and the existing arrangement for MSI sharing in the Sea of Azov and the Kerchenska Strait (the service area of the Ukrainian Berdiansk NAVTEX station) is violated by the Russian Federation on a regular basis. Thus, Ukraine provided:

- 8 new examples of NAVTEX transmissions from Novorossiysk NAVTEX station containing MSI for outside of their designated service area (such as the Sea of Azov, the Kerchenska Strait, the Kerch-Yeni-Kale channel) for the period of January-June 2019 as well as 28 new examples for the period of July-November 2019.

In February 2020 Ukraine informed the IMO NAVTEX Coordinating Panel about the following violations by the Russian Federation:

- 1) 10 examples of NAVTEX transmissions from Novorossiysk NAVTEX station containing MSI for outside of their designated service area (such as the Kerchenska Strait and the Kerch-Yeni-Kale channel) for the period of December 2019;
- 2) on 20 December 2019 the State Hydrographic Service of Ukraine (SHSU) recorded the Coastal Warning No. 681 broadcasted by the Novorossiysk NAVTEX station concerning the partial closure of the Kerch Strait under the pretext of military exercises. However, Ukraine has received no information about the partial closure neither from the Russian Federation, nor from the NAVAREA III Coordinator.

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In March 2020, the IMO NAVTEX Coordinating Panel has contacted the Russian Federation with a request that the appropriate internationally agreed protocols and procedures are complied with.

In June 2020, Ukraine informed the IMO NAVTEX Coordinating Panel about the following violations by the Russian Federation:

- 1) 16 examples of NAVTEX transmissions from Novorossiysk NAVTEX station containing MSI for outside of their designated service area (such as the Kerch Strait and the Kerch-Yenikale canal) for the period of January-March 2020;
- 2) on 10 June 2020 the State Hydrographic Service of Ukraine (SHSU) recorded the Coastal Warning No.280 broadcasted by the Novorossiysk NAVTEX station concerning the closure of the Kerch Strait under the pretext of military exercises. However, the mentioned Coastal Warning didn't contain the date of the announced event termination and had been broadcasted only half an hour before it entered in force, thus violating the Joint IHO/IMO/WMO S-53 Manual on MSI.

During July 2020 – March 2021, the monitoring server of the NAVTEX system in the city of Mariupol, operated by the SHSU, recorded multiple transmissions of navigational warnings by the Russian Federation using the Novorossiysk NAVTES radio station and covering the Kerchenska Strait area, which is under the sole authority of the Ukrainian Berdiansk NAVTEX station.

Moreover, the untimely and incorrect submission of navigational information by the Russian Federation, including through the NAVAREA III Coordinator, poses a threat to the safety of navigation in the Black Sea and Azov Sea region. In total, for the period July-December 2020, 39 of the aforementioned navigational warnings were transmitted by the unauthorized Russian NAVTEX stations.

In addition, in July-December 2020, there were cases of duplication or overlap by the RF of navigational warnings on the closure of areas in the Black Sea previously notified by Ukraine to the NAVAREA III Coordinator.

6. C-55 latest update (Tables)

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

Nation/ Area	A	B	C	Amplifying notes including significant gaps in coverage
Ukraine	75%/100%	25%/0%	0%/0%	High-priority tasks: a. Regional routes: water areas of sea ports and their approach channels, in particular in the north-western part of the Black Sea, Kerchenska Strait and approaches to it. b. Inland waterways routes: surveys for inland charts of the Dnipro, Danube and Pivdennyi Buh rivers.

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In accordance with the IHO C-55 Annex B, the latest update on the status of Ukrainian charts portfolio coverage in Ukrainian zone of responsibility in the International Charting Region F is as follows:

Nation/Area	Offshore passage/ Small			Landfall and Coastal passage/ Medium			Approaches and ports/ Large			Amplifying notes
	A	B	C	A	B	C	A	B	C	
Ukraine	100%	-	100%	100%	-	100%	100%	-	99%	Ukraine does not produce RNCs. A number of large-scale charts needs to be updated.

7. Capacity Building

a. Offer of and/or demand for Capacity Building

According to the Standards of Competence for Hydrographic Surveyors (S-5 IHO Publication) the SHSU has implemented the program of advanced training for hydrographic surveyors using facilities of the National University ‘Odesa Maritime Academy’. Meanwhile, the State Hydrographic Service of Ukraine has been constantly looking for supplementary ways of its personnel training, such as visiting by our hydrographic surveyors various specialized courses under the auspices of the International Hydrographic Organization.

b. Training received, needed, offered

From December 2020 to February 2021 five SHSU professionals participated in the IALA World-Wide Academy training course on the use of the IALA Risk Management Tool – IWRAP Mk II.

In April 2021 ten SHSU professionals completed the training course “Modern Maritime and River Hydrography” in the National University Odesa Maritime Academy.

The HYPACK training seminar on hydrographic survey software took place in Odesa in November 2020. The seminar was presented by the engineering staff of HYPACK Inc. in the National University ‘Odesa Maritime Academy’.

c. Status of national, bilateral, multilateral or regional development projects with hydrographic component (in progress, planned, under evaluation or study):

To date the SHSU has concluded the agreement on exchange of navigational information with the United Kingdom Hydrographic Office (UKHO). For the purpose of the ENC’s distribution, the agreements have been signed with the RENC PRIMAR and UKHO.

d. Definition of bids to IHO CBC

The State Hydrographic Service of Ukraine is in want of training its personnel through participation at the following courses/workshops/seminars:

Short courses:

- Hydrographic Data Management;
- Advanced ENC and ENC Production;
- S-100 and Product Specifications;
- Cartographic Data Management;
- Law of the Sea Workshop.

Long courses:

- Category “B” Hydrographic Programme;
- Category “B” Nautical Cartography Programme.

8. Oceanographic Activities

a. General

On regular basis the SHSU conducts survey of waters and currents structure in four areas, which are situated on the approaches to ports of Ukraine:

1. Odesa area. The area of the Gulf of Odesa and approaches to the Odesa Port.
2. Hryhorivka area. The area on approaches to the Adzhalyk Estuary (Pivdennyi Port).
3. Chornomorsk area. The area on approaches to the Sukhyi Estuary (Chornomorsk Port).
4. Dnister area. The area on approaches to the Dnistrovskiy Estuary.

The SHSU uses a data buoy with the purpose of monitoring of meteorological and oceanographic findings aimed to safety of navigation support in approaches to the ports of Odesa, Chornomorsk and Yuzhnyi.

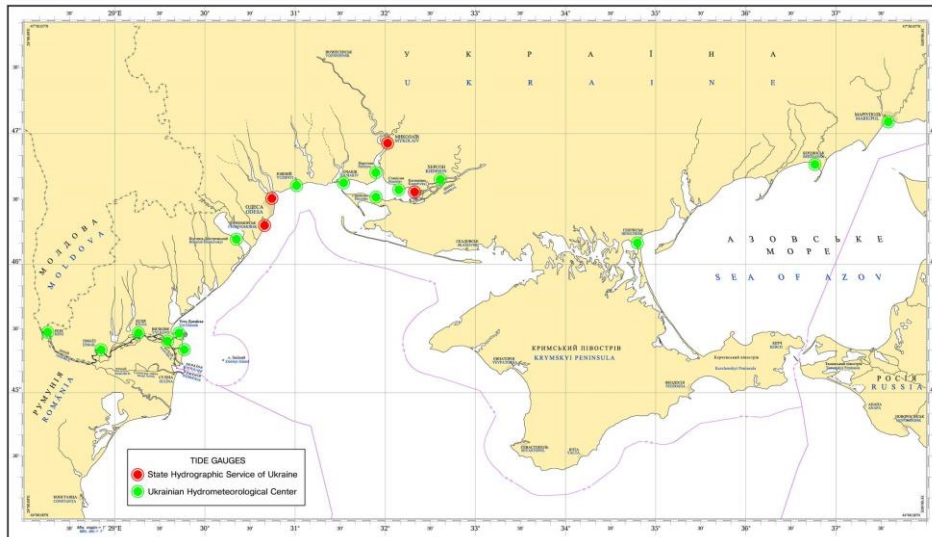
Along with the analysis of instrumental observations, the SHSU is processing the reanalysis data on the heaving in the Black Sea over the last 10 years. The research results have allowed applying the obtained data to calculate the heights of significant waves for offshore areas.

b. GEBCO/IBC's activities

NtR

c. Tide gauge network

The SHSU operates automatic tide gauges designed for continuous monitoring of sea level on the coast of the Black Sea.



d. New equipment

In 2019-2020, the SHSU set out into service the following oceanographic equipment:

- Portasal Salinometer 8410 A salinity meter
- Signature 500 VM mobile vessel-mounted precision tool for sea and river currents surveys
- MIDAS CTD+, a CTD recoder.

e. Problems encountered

NtR

9. Other activities

a. Participation in IHO Working Groups

The employees of the State Hydrographic Service of Ukraine take part in the activities within MBSHC and BASWG.

b. Meteorological data collection

There is a formal agreement between the State Hydrographic Service of Ukraine and the Ukrainian Hydrometeorological Center of the State Emergency Service of Ukraine (UkrHMC) covering the issues of usage of meteorological and hydrological information for the Black and Azov Seas and inland waterways.

Using the data buoy, the SHSU collects meteorological data (air temperature, atmospheric pressure, wind velocity and direction, visibility) in approaches to the ports of Odesa, Chornomorsk and Yuzhnyi.

c. Geospatial studies

NtR

d. Disaster prevention

NtR

e. Environmental protection

NtR

f. Astronomical observations

NtR

g. Magnetic/Gravity surveys

NtR

h. MSDI Progress

NtR

i. Overlapping issues: national ENC's

The SHSU raises its concerns on the situation that has come about the ENC overlapping issues in the Black Seas and Sea of Azov.

The most extreme concerns are caused by the fact that the existing ENC overlapping cases may cause threatens to the safety of navigation in the region.

In pursuance of the IHO Resolution 1/2018 (IHO CL19/2018) as concerns defining the overlapped ENC data significant for the navigational safety within the area of its chart production and preventing to increase the aforementioned cases, the SHSU analyzes and provides with the corresponding information the Region F International Charting Coordinator (ICC).

Meanwhile, Ukraine stresses on its permanent unwavering commitment to the WEND Principles, as defined by the IHO Resolution 1/1997 as amended – “Principles of the Worldwide Electronic Navigational Chart Database (Wend) & its Annex (Guidance for Establishment of ENC Production Boundaries)”, as follows, –

“Guidance for the Establishment of ENC Production Boundaries

1 ENC duplication should be avoided. A single ENC producing country should exist in any given area.

2 A country is normally the ENC producing country for waters within its national jurisdiction.

3 Responsibility for the production of ENC can be delegated in whole or in part by a country to another country, which then becomes the producing country in the considered area.”

BASWG15

Among other things, in accordance with the IHO Publication S-65 – “ENC Production Guidance”, the hydrographic offices are responsible for digital data processing, distribution and its further updating for the waters within their national jurisdictions.

Meeting the requirements of the relevant IHO Publications, the SHSU produces ENCs in six Usage Bands for the area of responsibility of Ukraine in the Black Sea and Sea of Azov, which is limited to the continental shelf boundary line and exclusive economic zone (with Turkey and Romania) and boundary line as specified by the legal acts of Ukraine (with the Russian Federation).

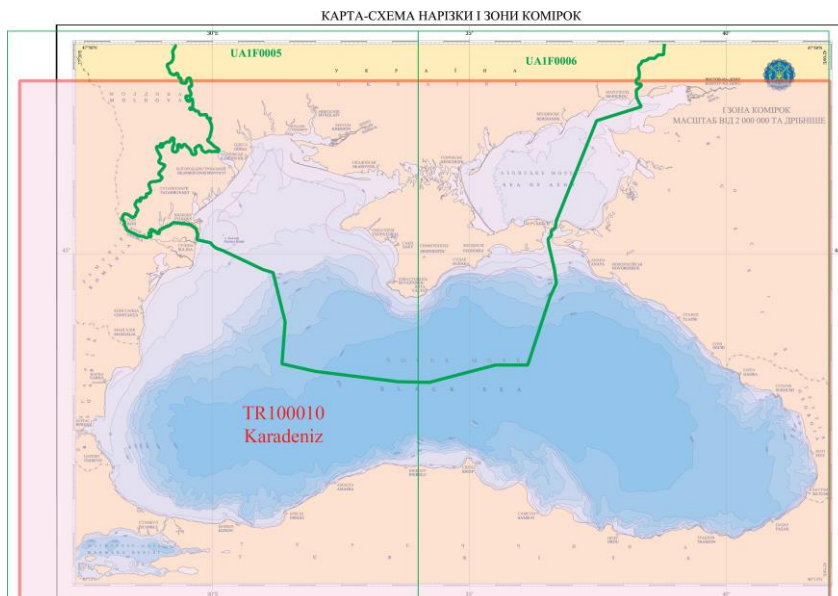
Ukraine produces, distributes and updates its official ENCs through the facilitation of the Regional Electronic Navigational Chart Co-ordinating Centre (RENC) and other international partners for its jurisdiction zone only.

At the same time, Ukraine has never delegated its responsibility (either in full or in part) for ENC production for the zone of jurisdiction of Ukraine to any of foreign states.

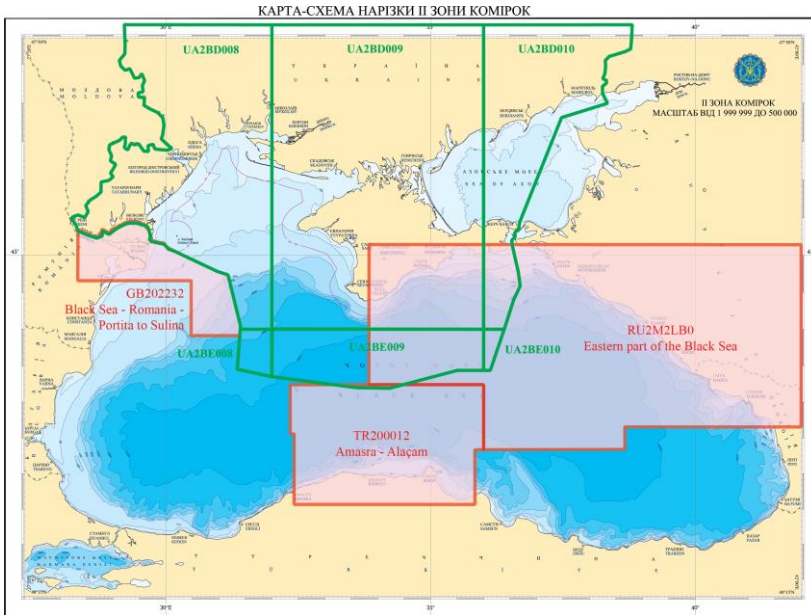
Nevertheless, to date the Ukrainian ENCs have 38 overlapping cases with the ENCs produced by other countries, namely:

Russian Federation – 32
Turkey – 3
Romania – 5
Great Britain – 1

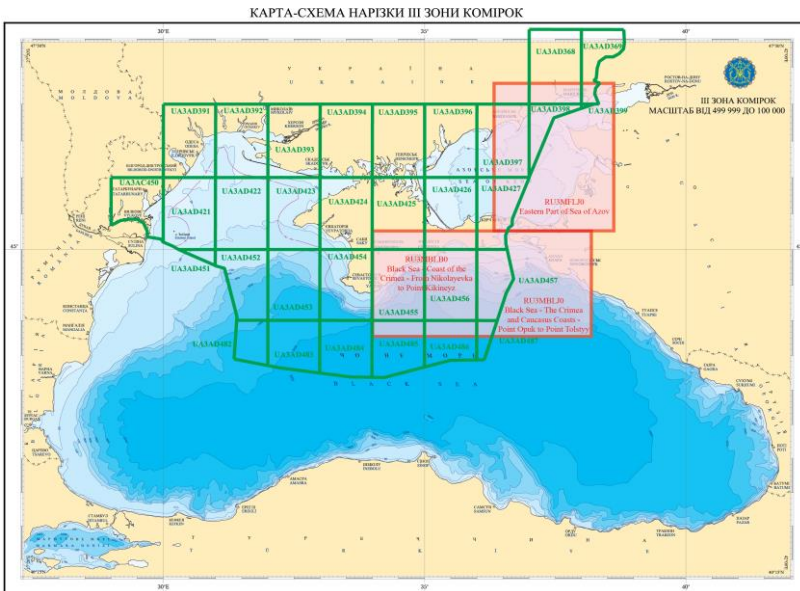
80 per cent of all overlappings for the zone of jurisdiction of Ukraine account for Russia. What is more, the whole number of the Ukrainian ENCs is 100 per cent overlapped.



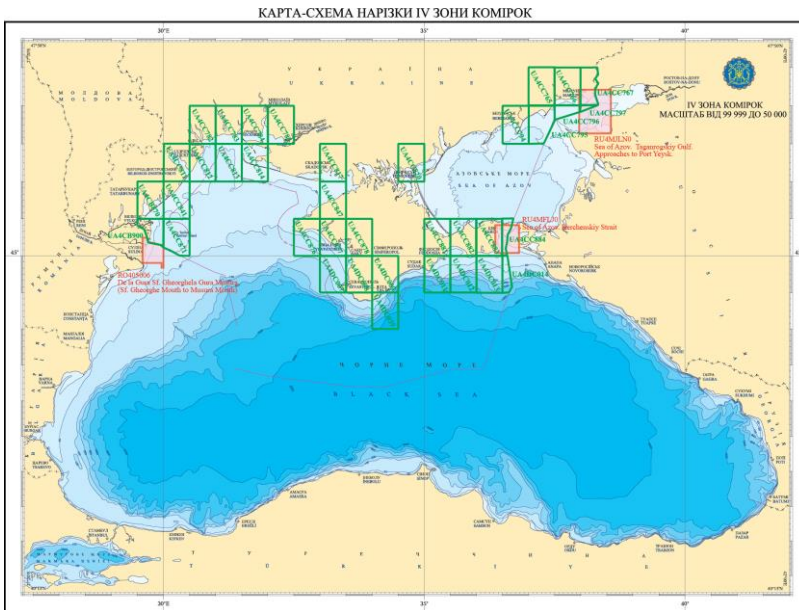
Ukrainian Usage Band 1 ENCs overlapping with Turkish ENC TR100010 Karadeniz



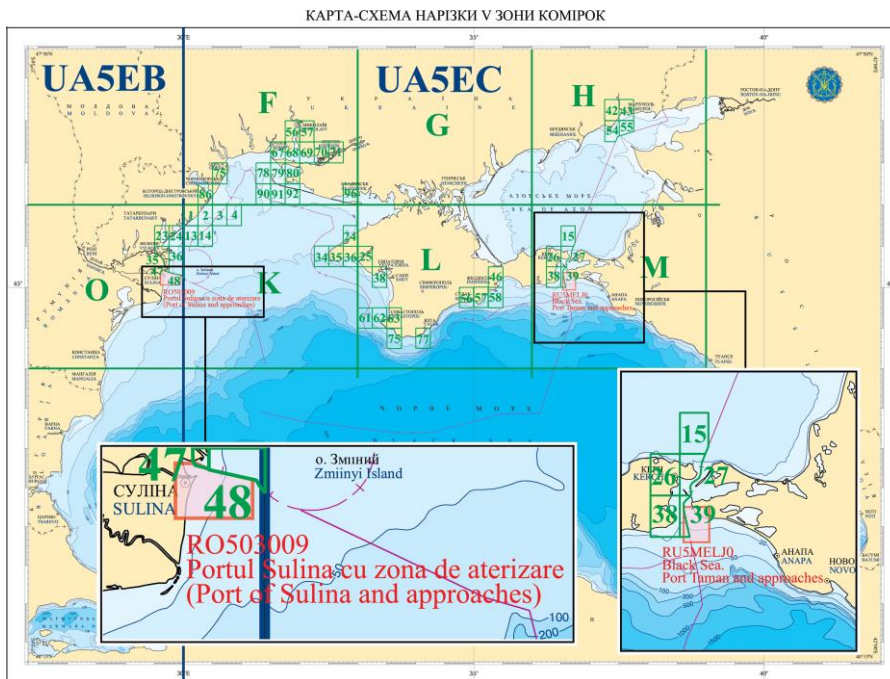
Ukrainian Usage Band 2 ENCs overlapping with
Russian ENC RU2M2LB0 - Eastern part of the Black Sea
Turkish ENC TR200012 - Amasra – Alaçam
British ENC GB202232 - Black Sea - Romania - Portița to Sulina



Ukrainian Usage Band 3 ENC's overlapping with Russian ENC's –
RU3MBLJ0 - Black Sea - The Crimea and Caucasus Coasts - Point Opuk to Point Tolsty
RU3MBLB0 - Black Sea - Coast of the Crimea - From Nikolayevka to Point Kikineyz
RU3MFLJ0 - Eastern Part of Sea of Azov



Ukrainian Usage Band 4 ENC's overlapping with Russian ENC's –
RU4MFLJ0 - Sea of Azov. Kerchenska Strait
RU4MJLN0 - Sea of Azov. Taganrogskiy Gulf. Approaches to Port Yeysk
And Romanian ENC RO405006 - De la Gură Sf. Gheorghe la Gură Musura (Sf. Gheorghe Mouth to Musura Mouth)



Ukrainian Usage Band 5 ENCs overlapping with
 Russian ENC RU5MELJ0 - Black Sea. Port Taman and approaches
 Romanian ENC RO503009 - Portul Sulina cu zona de aterizare (Port of Sulina and approaches)

At that, the situation of Ukrainian ENCs overlapping with Russian charts has become even more complicated following the illegal annexation of the Autonomous Republic of Crimea by the Russian Federation. Moreover, even before 2014 there had been no the slightest willingness to collaborate on the issue from the side of Russia. At this point, the bilateral negotiable solution of the issue is low-probable, taking into account the Crimea annexation and occupation, and also emanating aggression of the Russian Federation against Ukraine.

One among the possible steps to solving the matter could be a more effective pressure of the IHO on the RENCs aiming to more severe adherence both to the IHO recommendations and WEND Principles by the ENC printing nations, including the Guidance for the Establishment of ENC Production Boundaries, in particular as concerning the ENC production for waters within the zone of national jurisdiction.

Nevertheless, the SHSU, in the same way as before, urges the hydrographic offices of the Black and Mediterranean Seas region to give up the current practice of distribution under the facilitation of the RENCs the ENCs for waters within the jurisdiction zone of the third (foreign) countries (except for the cases, when such distribution is stipulated by the corresponding agreements) for the purpose of avoidance the ENCs overlapping and so, decreasing the risks for navigation in the Black Sea and Sea of Azov.

As to the overlaps between Ukrainian ENC's, it should be stated that Ukraine has implemented a system of ENC cells of the 1st, 2nd, 3rd, 4th and 5th usage bands (129 cells in total). Thus the implementation of ENC cells of the 5th and 6th usage bands will eliminate any overlapping between Ukrainian ENC's.

10. Conclusions

- 1 In 2019-2020 the State Hydrographic Service of Ukraine has successfully ensured the fulfillment of international obligations of Ukraine as pertaining to aids to navigation and, in particular, in development of aids to navigation system through implementation of new navigational, hydrographical and charting methods, techniques and technologies.
- 2 The high-priority tasks include hydrographic surveys in the sea areas of traffic separation schemes (TSS), recommended and actual vessel traffic routes, harbour waters and approaches to ports, heavy traffic areas and critical shallow waters.
- 3 The important condition for hydrographic surveys is a need in resurveying for the purposes of nautical charts re-edition and/or updating.
- 4 The SHSU ensures performance of hydrographic surveying along the inland waterways (the Dnipro, Danube and Southern Buh Rivers) for further update of the river navigational charts.
- 5 The SHSU perform hydrographic surveys for the Ukrainian state boundaries delimitation along the Danube River, pursuant to the Resolution of the Cabinet of Ministers of Ukraine.
- 6 At the same time, due to the Russian Federation's occupation and annexation of the part of Ukrainian territory since March 2014, the State Hydrographic Service of Ukraine has not had access to Ukraine's inland sea waters and territorial sea in the area of the Crimean Peninsula. According to the Law of Ukraine No. 1207-VII 'On Securing the Rights and Freedoms of Citizens and the Legal Regime on the Temporarily Occupied Territory of Ukraine' as of April 15, 2014, these waters have been defined as temporarily occupied territories.

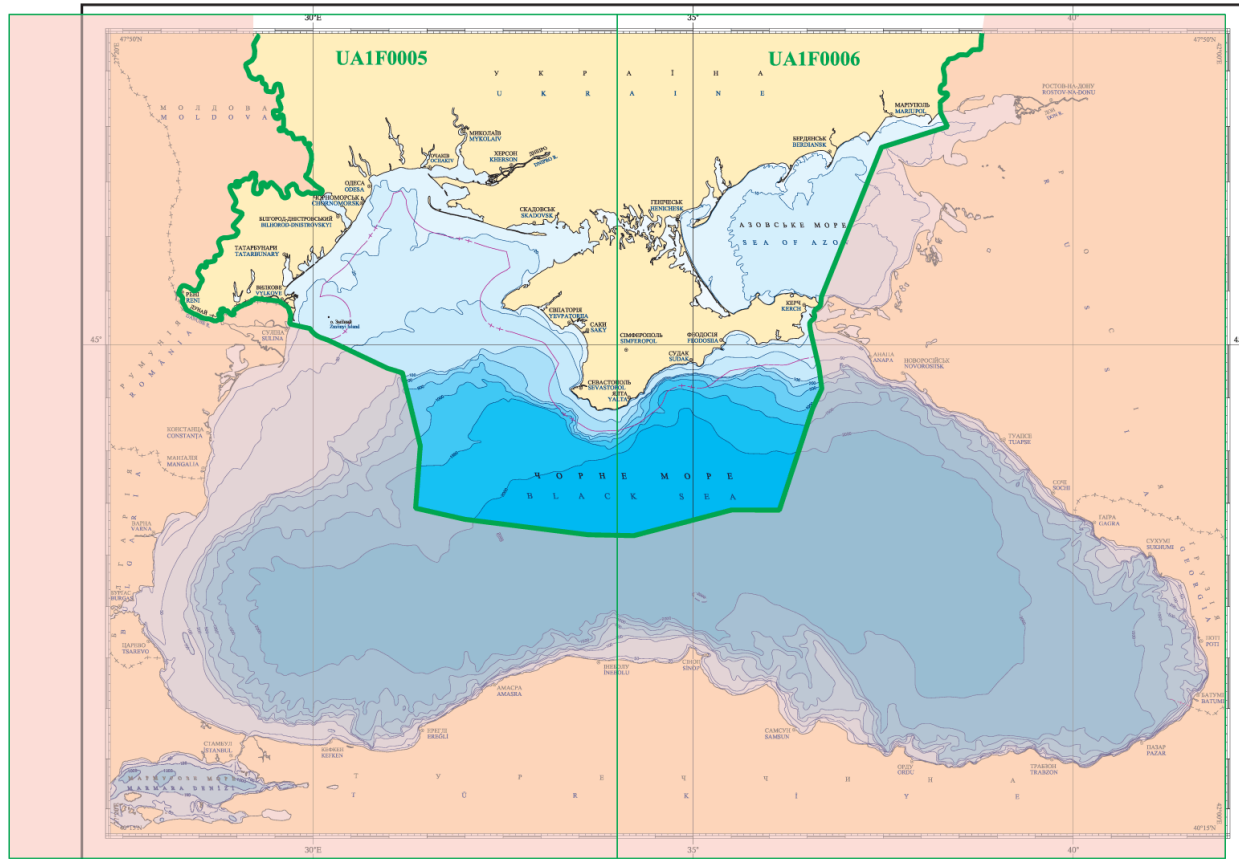
The sea ports of Kerch, Sevastopol, Feodosiia, Yalta, Yevpatoriia will remain closed until the restoration of the constitutional order of Ukraine within the territory of the Autonomous Republic of Crimea and the City of Sevastopol in accordance with the Order of the Ministry of Infrastructure of Ukraine No 255 of June 16, 2014.

- 7 The SHSU urges the IHO Member States to abide by the United Nations General Assembly Resolution A/Res/73/263 of 22 December 2018 "Situation of Human Rights in the Autonomous Republic of Crimea and the city of Sevastopol, Ukraine", which 'calls upon all international organizations and specialized agencies of the United Nations system, when referring to Crimea in their official documents, communications and publications, including with regard to statistical data of the Russian Federation, to refer to "the Autonomous Republic of Crimea and the city of Sevastopol, Ukraine, temporarily occupied by the Russian Federation", and encourages all States and other international organizations to do the same'.

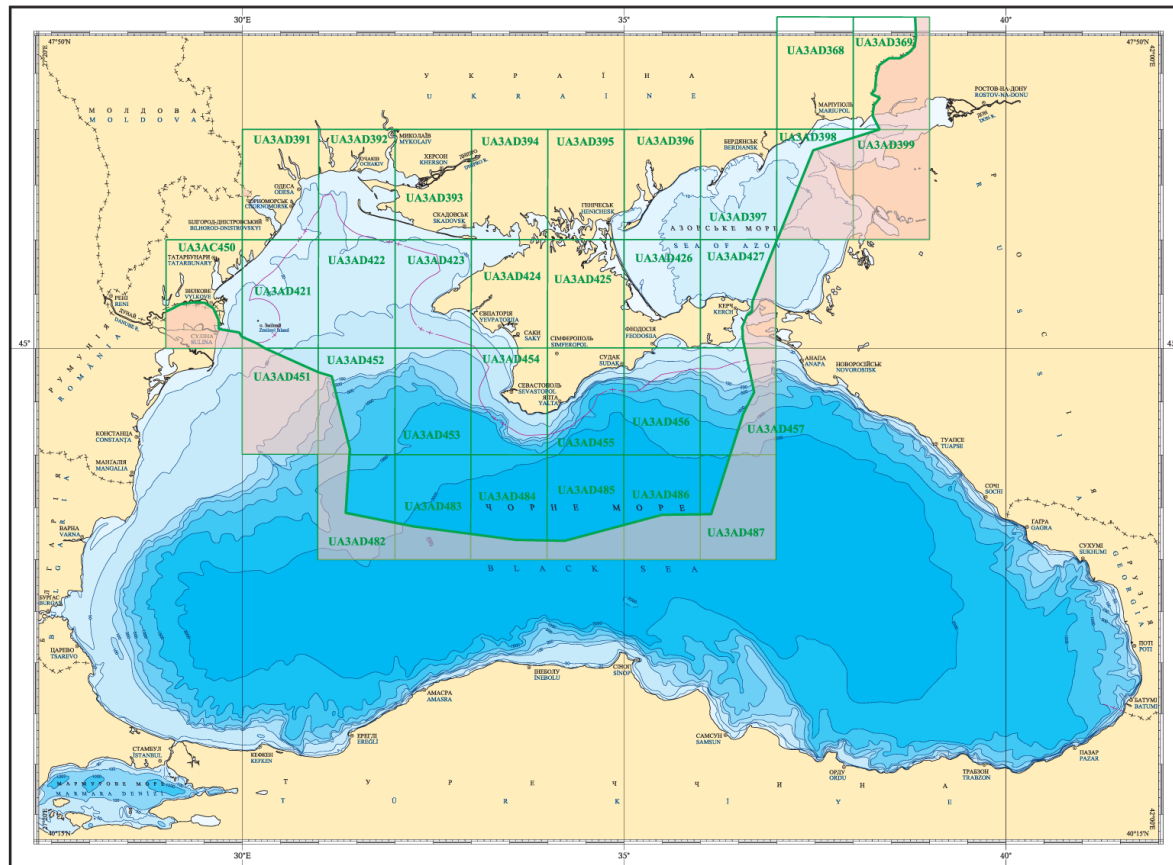
Date: 21 April 2021

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Usage Band 1 Coverage. Overview



Usage Band 3 Coverage. Coastal



Usage Band 4 Coverage. Approach

