MEDITERRANEAN and BLACK SEAS HYDROGRAPHIC COMMMISSION

(MBSHC)

BLACK and AZOV SEAS WORKING GROUP

(BASWG)

OFFICE OF NAVIGATION, HYDROGRAPHY and OCEANOGRAPHY

(ONHO)

14th MEETING of BASWG

CONSTANTA/ROMANIA 03-04 MAY 2018

14th Meeting of Black and Azov Seas Working Group (BASWG)

1. Hydrographic Office / Service (General, including updates for the IHO Yearbook e.g. re-organization):

Office of Navigation, Hydrography and Oceanography (ONHO) is the Government agency responsible for the publication and distribution of nautical charts and other information required for the safety of ships navigating in surrounding seas. It is also the Turkish Naval Forces (TNF) agency responsible for the provision of operational surveying support and Maritime Military Geographic Information for TNF operations and exercises.

The first official Turkish Hydrographic Organization was established in 1909 under the name of Maritime Surveying and Navigation Office. The mission of the office originally was to organize and perpetuate lighthouses, publish notices to mariners and to provide the navigation instruments to the navy. In 1956, the office moved to its present location Çubuklu, and in addition to the current equipment, modern electronic, oceanographic, geophysical and lithographic tools have been acquired. The name of the department was changed in 1972 to the Turkish Navy-Office of Navigation, Hydrography and Oceanography (TN-ONHO) so as to signify three main functions.

Turkey is member of IHO since 13 May 1969 and member of MBSHC since 24 August 1978.

Captain Hakan KUŞLAROĞLU has been serving as the Director of ONHO as of August, 2016.

2. Surveys:

a. New surveys:

Hydrographic/Oceanographic surveys made by TN-ONHO since BASWG-13 are listed below:

	Hydrographic	*Oceanographic*
Year (May 2016-April 2018)	*98*	*31*

b. New technologies and /or equipment:

(1) Procurement process of 4 new survey boats with MB equipment is going-on.

(2) Installation of survey boat for hydrographic ship TCG ÇEŞME completed.

(3) CARIS Bathy Data Base (BDB) installation has completed in April 2018.

(4) CARIS Hydrographic Product Database (HPD) procurement process will start in 2018.

(5) Procurement process of mobile survey equipment will start in 2018.

c. New ships:

Turkish Navy has a new survey vessel project. The new survey vessel will replace TCG ÇUBUKLU. The technical specifications of the vessel are completed and it is planned to be built in Turkey.

d. Problems encountered:

NtR

3. New charts & updates:

a. ENCs:

266 ENCs have been produced by Turkey.

Usage Band	***No of ENCs***
1	*2*
2	*12*
3	*35*
4	*70*
5	*108*
6	*40*
Total	***267***

b. ENC distribution method:

Turkish ENCs for SOLAS users are being distributed through IC-ENC, for Turkish Navy Vessels encrypted distribution by TN-ONHO.

c. RNCs:

No RNC production.

d. INT Charts:

Co-production of INT3808 with GE is going on. It is planned to be finalized after solving the discrepancy on delimitation of maritime boundary.

e. National paper charts:

(1) No new chart has been issued since May 2016.

Chart No.	Scale	Issue Date
-	-	-

(2) 18 new edition charts have been issued since May 2016.

Chart No.	Scale	New Edition Date
14A (Black Sea)	300,000	15/10/2016
35	300,000	15/10/2016
122 (Black Sea)	100,000	09/12/2017
123 (Black Sea)	100,000	24/02/2018
132 (Black Sea)	100,000	25/06/2016
133 (Black Sea)	100,000	25/06/2016
213	100,000	20/05/2017

Chart No.	Scale	New Edition Date
292	100,000	15/10/2016
311	100,000	15/10/2016
312	100,000	15/10/2016
324	100,000	24/09/2017
343	100,000	24/06/2017
2111	50,000	11/11/2017
2136	50,000	25/06/2016
2151	10,000	30/07/2016
2245	25,000	12/08/2017
2246	25,000	20/05/2017
2924	Plans Chart	15/10/2016

f. Maintenance of Nautical Charts:

(1) Paper charts are maintained by weekly NtMs

	Number of NtMs
May 2016-Apr 2018	*550*

(2) ENCs are maintained by weekly updates.

	Number of EN	***Number of ER***
May 2016-Apr 2018	*117*	*672*

g. Problems encountered:

NtR

4. New publications & updates:

a. New publications:

No.	***Type***	***Title***
1	***NP***	*Annual Notice to Mariners 2017*
2	***NP***	*Annual Notice to Mariners 2018*
3	***NP***	*Nautical Almanac 2017*
4	***NP***	*Nautical Almanac 2018*

b. Updated publications:

o.	*Type*	*Title*
1	***NP***	*Catalogue of Charts and Nautical Publications*
2	***NP***	*Symbols and Abbreviations used on Nautical Paper Charts (INT 1)*
3	***NP***	*List of Lights and Fog Signals*

c. Means of delivery:

Publications are being delivered as hard copy.

d. Problems encountered:

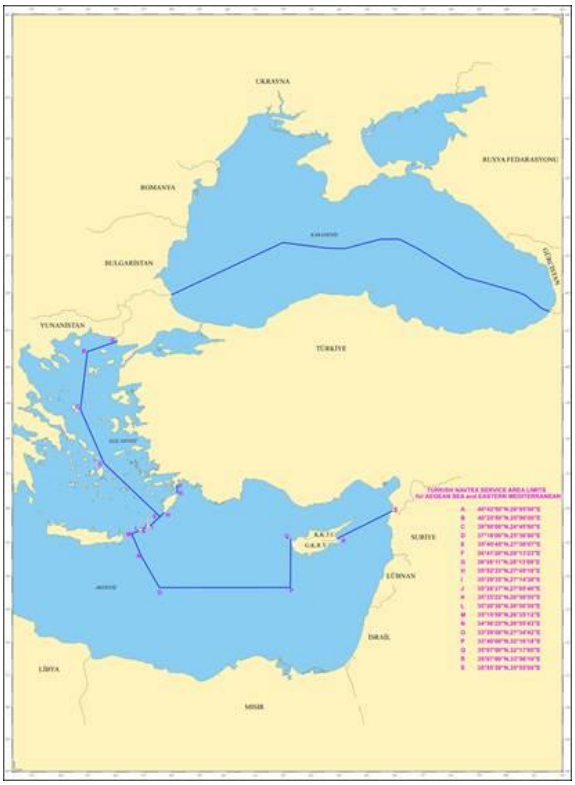
NtR

5. MSI:

a. Existing infrastructure for transmission:

Turkey, with its four NAVTEX stations (İstanbul, Samsun, İzmir and Antalya) has been a reliable provider of Maritime Safety Information (MSI) since 1985. HF NBDP system has been used in Istanbul NAVTEX station in order to increase its coverage area. Modernization of NAVTEX stations and MF systems were accomplished in 2004, rendering these infrastructures capable for remote control from Istanbul Control Centre.

MSI Services are provided on 7/24 basis. NAVTEX Stations are transmitting MSI warnings both in English and Turkish on 518 KHz and 490 KHz/4209,5 KHz respectively. Other communication systems (VHF, MF and HF) are also available to promulgate MSI warnings if needed. Turkish Coastal Radio Stations broadcast instant warnings and 24-72 hours weather forecasts both in written and verbal on VHF, MF and HF bands.



Turkish NAVTEX Service Areas

Turkey has also fully implemented the distress and safety communication requirements of the GMDSS by establishing VHF-DSC system in 1995 and MF-HF-DSC system in 2004 and making possible HF-DSC ship-to-shore tests on 4,6,8,12,16 MHz bands for vessels on long range. Furthermore, modernization projects of these systems have also been accomplished. The establishment of AIS Base stations along the entire Turkish coastline constitutes another major asset for ensuring maritime safety in surrounding seas.

TN-ONHO has been national coordinator for navigational warnings since 23 June 2010. Number of Coastal and NAVAREA Warnings disseminated last three years by TN-ONHO listed below:

Year	*NAVTEX Warnings*	*NAVAREA-III Warnings*
May 2016-Nis 2018	*2532*	*423*

b. New infrastructure in accordance with GMDSS:

NtR

c. Master Plan:

NtR

d. Problem Encountered:

NtR

6. C-55:

Latest update is on 18 September 2013.

7. Capacity Building:

a. Offer of and/or demand for Capacity Building:

ONHO needs CAT-B Nautical Cartography and CAT-A Hydrography Training.

b. Training received, needed, offered:

Two participants from TN-ONHO received the Workshop on Technical Aspects of Maritime Boundaries which was held in İstanbul between 26 November and 01 December 2018.

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

TN-ONHO has bilateral agreements with UK, France, Deutschland, Romania and Ukraine. Bilateral agreement was also signed with Azerbaijan in 2017.

d. Definition of bids to IHO CBSC:

Since 13th BASWG Meeting, two CAT-B Hydrography Courses (in Turkish) was held in TN-ONHO. CAT-B Hydrography Course is accredited for the second time.

8. Oceanographic activities:

a. General :

Currently TN-ONHO conducts oceanographic, geological and geophysical surveys. Collected data is processed and used for navigational and military purposes. TNONHO has a geology lab as well to analyse the sediment samples for particle size. TN-ONHO provides operational environmental support to the end users recently.

Determining data is the first step to conduct scientific analysis in ocean sciences. Collecting and managing data systematically is of vital importance in the Black Sea since the physical, chemical and biological parameters are highly influenced by coastal effects such as river run offs, water mass input from Mediterranean through Turkish Strait Systems, upwellings/downwellings due to atmospheric conditions and deep water features.

Conducting a joint scientific oceanographic research expedition would serve perfectly to improve systematic ocean observation, data management and sustainable ocean research program vision in the region.

*With this perspective "**Joint Oceanographic Expedition – 2018**" will be conducted by Turkish Research Vessel R/V ÇEŞME August 2018. This activity will be implemented mainly under the umbrella of UNESCO IOC regional IOC Black Sea and ODIN Black Sea with participation of Black Sea Countries' Oceanographic Research Institutes.*

b. GEBCO/IBC's activities:

NtR

c. Tide gauge network:

There are 20 tide gauges operated by General Mapping of Agency. The locations of the gauges can be seen below.

Since the last meeting there is a new project of fixed GNSS integrated RADAR level measuring tide gauge. One of them is established.

b. New equipment:

NtR.

b. Problems encountered:

NtR

9. Other activities:

a. Participation in IHO Committee/Sub-Committee/Working Groups:

(1) TN-ONHO participated in the following IHO events:

- WWNWS meetings
- HSSC meetings
- IHO Assembly-1 (One of MBSHC Members of Assembly)
- IHO Council-1
- S-100 WG &ENCWG meetings
- WENDWG meetings
- NCWG meetings
- CBSC meetings
- MBSHC20 meeting
- HSSC meetings

- NCSR meetings

(2) TN-ONHO plans to participate in the following IHO events in 2018:

- HSSC10 meeting
- CBSC16 meeting
- IRCC10 meeting
- IHO Council
- NCWG4 meeting

b. Meteorological data collection:

TN-ONHO with meteo stations on its survey vessels collects basic meteorological parameters. Meteorological atlases of the seas around Turkey have been published. As the data sets get bigger the atlases are renewed with latest statistical analysis. TN-ONHO provides the Navy with METOC support including weather forecast.

c. Geospatial studies:

Chart Display and Information System (CAS-DENIZ) has been established in March 2015. CAS-DENIZ is a "Google earth" like GIS displaying charts, vector layers, navigational warnings and other geospatial data on a 3D globe. It is all functions are open to military users and its web based MSI service to public use.

d. Disaster prevention:

Turkey participates in the Tsunami Warning System efforts conducted under the Intergovernmental Oceanographic Commission (IOC) of UNESCO frame. Kandilli Observatory and Earthquake Research Institute (KOERI) provides online 7 sea level stations (Sinop, Marmara Ereğlisi, Gökçeada, Bodrum, Taşucu, Erdemli and İskenderun) data to IOC under the NEAMTWS project. TN-ONHO supports KOERI in its Tsunami Warning activities.

e. Environmental protection

NtR

f. Astronomical observations

NtR

g. Magnetic/Gravity surveys

NtR

h. Other :

TSS was established in the Bay of Izmit, Bay of Izmir, Bay of Iskenderun and the Aliağa/Nemrut Harbour.