



NATIONAL REPORT OF TURKEY  
15<sup>st</sup> Meeting of BASWG, 11 May 2021, VTC

### Hydrographic Office/Service

1. 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.
2. In 1956, the office moved to its present location Çubuklu, and in addition to the current measuring equipment, modern electronic, oceanographic, geophysical and lithographic tools have been acquired.
3. 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.
4. Principle functions of the TN-ONHO, currently, are:
  - *Hydrographic Surveys*
  - *Paper Charts and Electronic Navigation Charts*
  - *Nautical Publications*
  - *Weekly NtM Bulletin*
  - *Navigational Warnings*
  - *Operational Support for Navy*  
(*by means of physical, chemical, geological, biological and geophysical surveys and studies*)
  - *Supply of Charts and Nautical Publications*
5. Captain Hakan KUŞLAROĞLU has been serving as the Director of TN-ONHO since August 18<sup>th</sup>, 2016.

### Surveys

1. Hydrographic/Oceanographic surveys made:

Year	# of Surveys
2019	43
2020	31
2021	16

2. New technologies and/or equipment:
  - 2 Portable MBESs
  - 1 Portable PH & O<sub>2</sub> Measurement Device
  - 4 Catamaran Survey Boat (*all equipped with MBE Systems*)

## Nautical Charts

1. ENCs: 269 ENCs is produced by Turkey.

Usage Band	# of ENCs
1	2
2	12
3	35
4	71
5	109
6	40
Total	269

2. ENC Distribution Method: Turkish ENCs are being distributed through IC-ENC.

3. Paper Charts:

- a. New Charts (*since the last meeting*)

Chart #	Scale	Issue Date
2928	1/30000	15.02.2020

- b. New Edition Charts (*since the last meeting*)

Chart #	Scale	Issue Date
30	1/1020000	14.12.2019
2143	1/10000	31.08.2019
2916	Inset	23.11.2019
2924	Inset	02.11.2019
2941	Inset	23.05.2020
3110	1/25000	18.01.2020
3111	Inset	19.11.2019
3001	1/25000	23.05.2020

4. Publications:

- a. New Publications

#	Type	Title
1	NP	Catalogue of Charts and Nautical Publications
2	NP	List of Lights and Flag Signals
3	NP	Annual Notice to Mariners
4	NP	Turkish Straits Navigation Guide

- b. Updated Publications

#	Type	Title
1	NP	Port Regulations

## MSI

Turkey, with its four NAVTEX stations (İstanbul, Samsun, İzmir and Antalya) has been a reliable provider of Maritime Safety Information (MSI) since 1987. 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 need be. Turkish Coastal Radio Stations broadcast instant warnings and 24-72 hours weather forecasts both verbally and in written format, via VHF, MF and HF bands.

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 at 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. The number of Coastal and NAVAREA Warnings disseminated in the last three-year period by TN-ONHO are listed below:

Year	# of NAVTEX Warnings	# of NAVAREA-III Warnings
2019	1603	393
2020	1644	474
2021	369	58

## Capacity Building

1. CAT-B Hydrographic Course of TN-ONHO was recognized by FIG/IHO/ICA International Board on Standards of Competence for Hydrographic Surveyors and Nautical Cartographers (IBSC) in 2018, for the second time and for another 6 years, following its initial recognition in 2011. Since last meeting three iterations of the course has been completed, and the fourth one is currently uderway.

2. Bilateral Activities:

a. TN-ONHO has bilateral agreements with United Kingdom, France, Germany and Romania.

b. Bilateral agreements with Russian Federation, Ukraine, Azerbaijan and Republic of Korea are in progress.

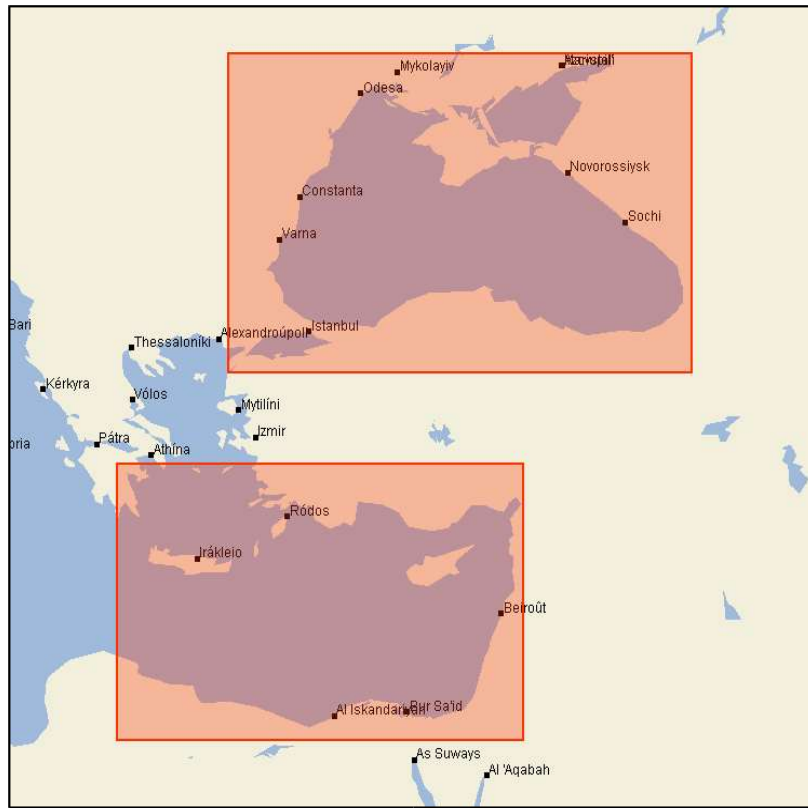
## **Oceanographic activities**

1. General: Currently TN-ONHO has an active oceanographic branch that can conduct oceanographic, geological and geophysical surveys. Collected data is processed and used for navigation, scientific and operational purposes. TN-ONHO has a geology lab, as well, to analyze the sediment samples with respect to distinct particle sizes. TN-ONHO also provides operational environmental support to the NAVY in the framework of METOC Support and by means of meteorological/oceanographic prediction models and with the support of real-time measurements.
2. Tide gauge network: There are 20 tide gauges operated by General Directorate of Mapping. The locations of the gauges are given below.

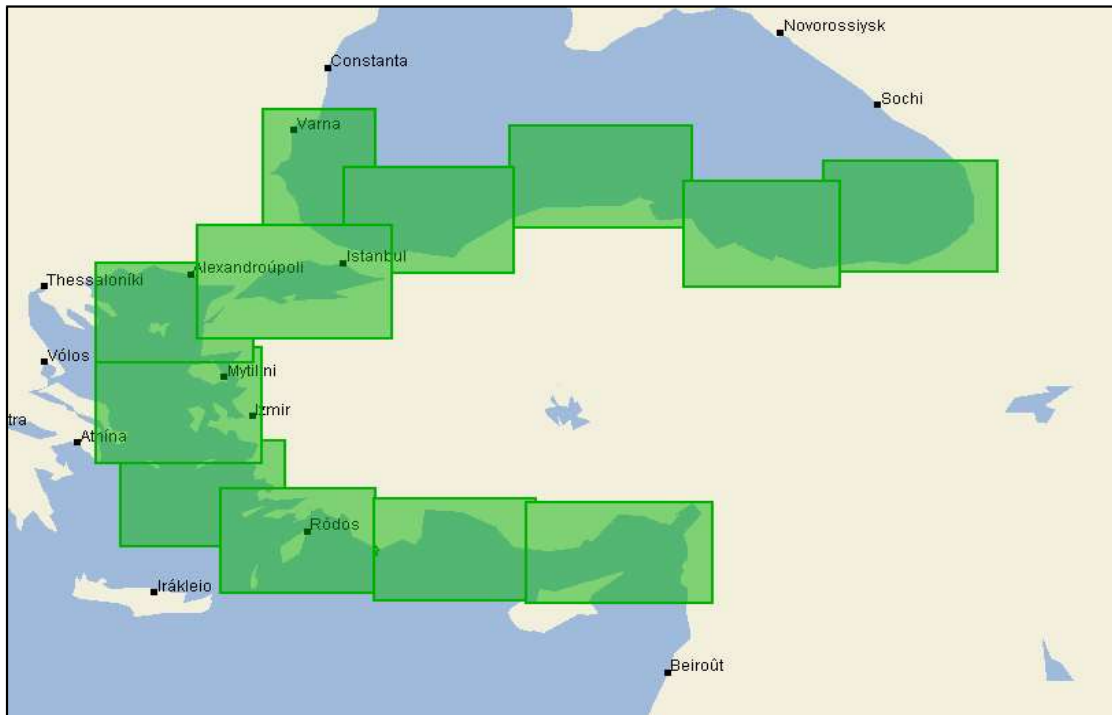
## **Other activities**

1. Participation within the IHO: TN-ONHO has been participating in the following IHO events:
  - IHO Assembly
  - HSSC Meetings
  - IRCC Meetings
  - HSWG Meetings
  - BASWG Meeting
  - CBSC Meetings
  - ENCWG Meetings
  - NCWG Meetings
  - WNWWS Meetings
  - Technical Visits
2. Meteorological data collection: TN-ONHO has meteo stations and collects meteorological parameters. Meteorological and Oceanographic atlas of the surrounding seas of Turkey have been going through a revision with the help of recent relevant data obtained.
3. Geospatial studies: Chart Display and Information System (CAS-Deniz) has been established in March 2015 (which was named "DEHABSUS", previously). With a globe-based approach (as it is in Google Earth), CAS-Deniz is capable of displaying charts, vector layers, navigational warnings and other geospatial data in 2D/3D. Apart from its military use, it also has been made available to the public with limited capabilities in 2D.
4. 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 data of seven sea level stations (Sinop, Marmara Ereğlisi, Gökçeada, Bodrum, Taşucu, Erdemli and İskenderun) online to IOC under the NEAMTWS project.
5. Environmental protection: Ministry of Environment conducts long term monitoring activities around Turkish Coasts to assess the physical, chemical, biological and environmental parameters. The purpose is to observe the current situation, to detect the possible changes, and to assist the decision makers in coastal zone management.

**FIGURES**



*Figure 1: Turkish UB-1 ENC Coverage*



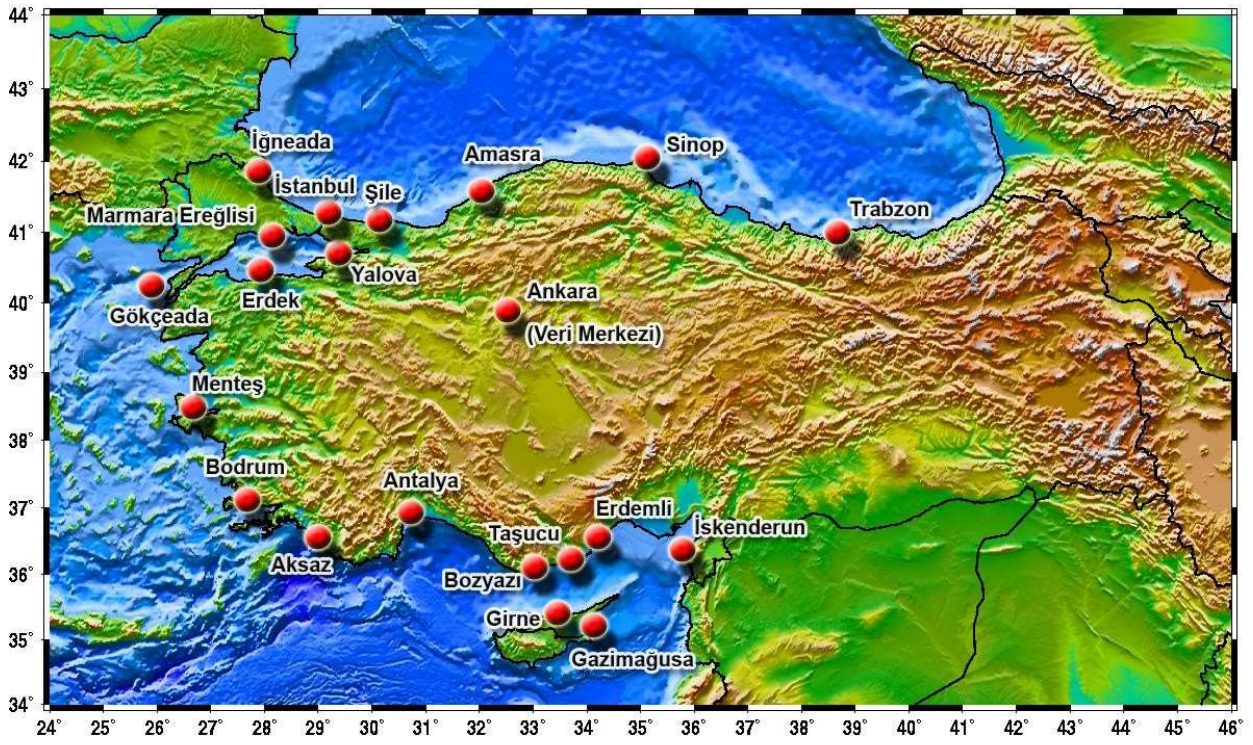
*Figure 2: Turkish UB-2 ENC Coverage*



*Figure 3: Turkish UB-3 ENC Coverage*



*Figure 4: Turkish UB-4,5,6 ENC Coverage*



*Figure 5: Location of Tide Gauges operated by the General Directorate of Mapping*