

NATIONAL REPORT OF TURKEY
20th Meeting of the MBSHC, 04-06 July 2015, Hergec Novi

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

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.

Principle functions of the TN-ONHO are:

- *Hydrographic Surveys*
- *Paper Charts and Electronic Navigation Charts (ENC)*
- *Nautical Publications*
- *Weekly NtM Bulletin*
- *Navigational Warnings*
- *Military Geography and Operational Support for Navy (physical, chemical, geological, biological) and geophysical surveys and studies*
- *Charts and publications Supply*

Captain Hakan KUŞLAROĞLU has been serving as the Director of TN-ONHO as of 18th of August, 2016.

2. Surveys:

a. New surveys:

Hydrographic/Oceanographic surveys made by TN-ONHO since XIXth MBSHC are listed below:

Year	Hydrographic	Oceanographic
2016	26	15
2017(as of 15 June)	24	5

b. New technologies and /or equipment:

One Acoustic Doppler Current Profiler (ADCP) was recorded into the system in 2017.

c. New ships:

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d. Problems encountered:

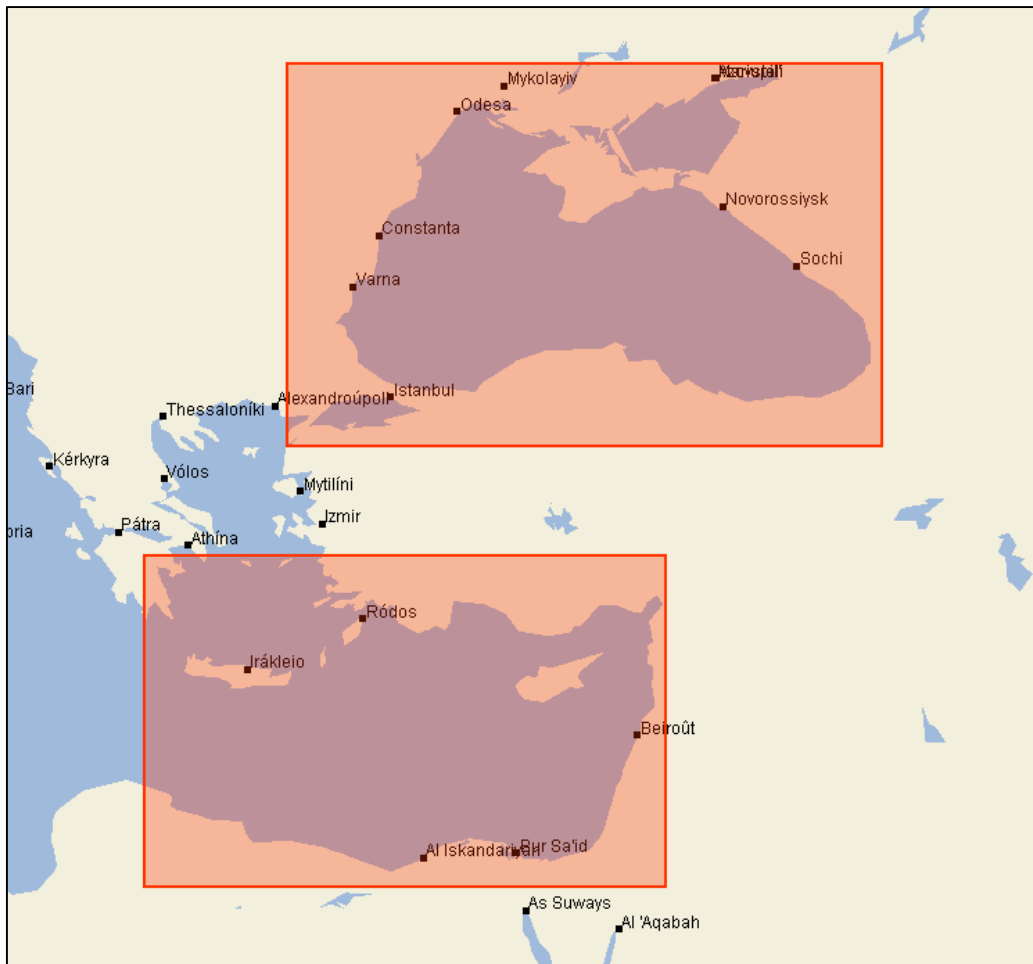
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3. New charts & updates:

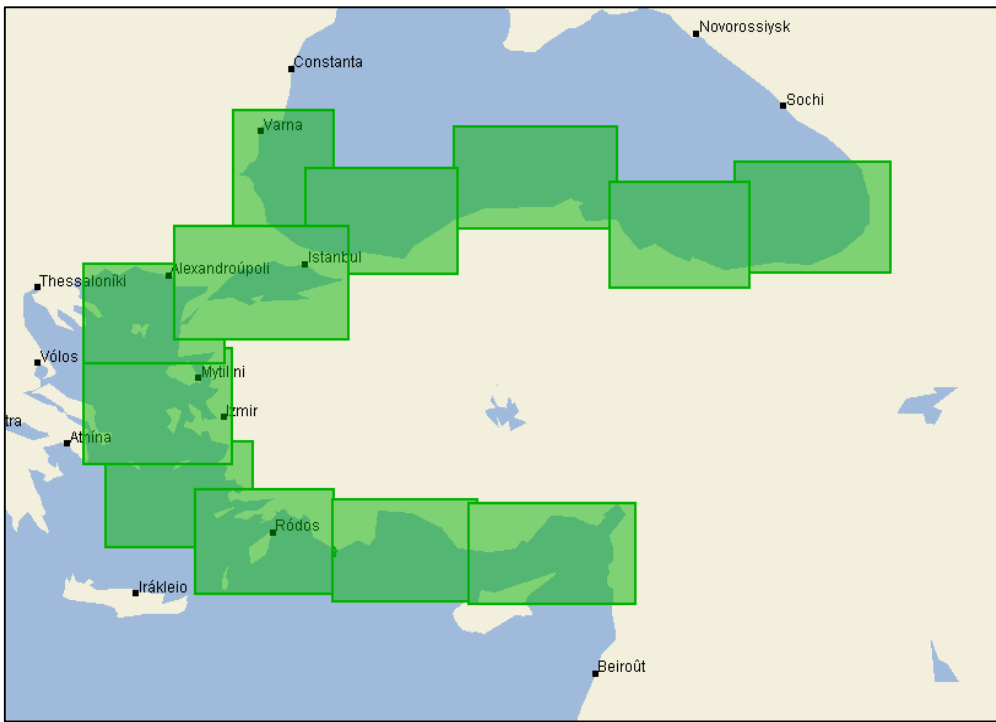
a. ENC's:

269 ENC's have been produced by Turkey.

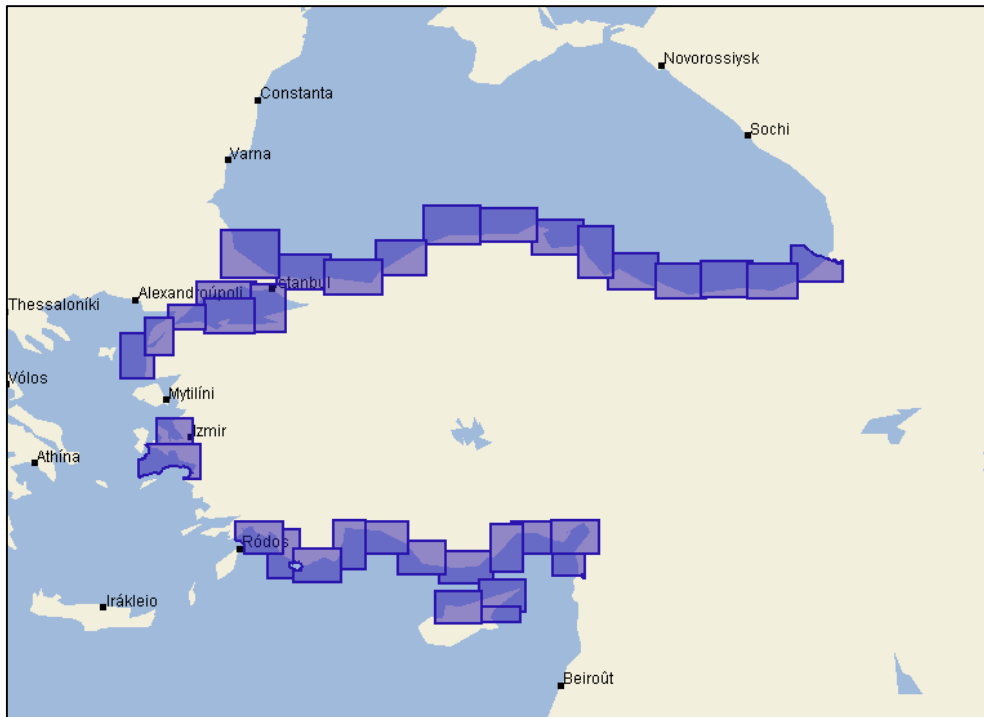
Usage Band	No of ENC's
1	2
2	12
3	35
4	70
5	108
6	40
Total	269



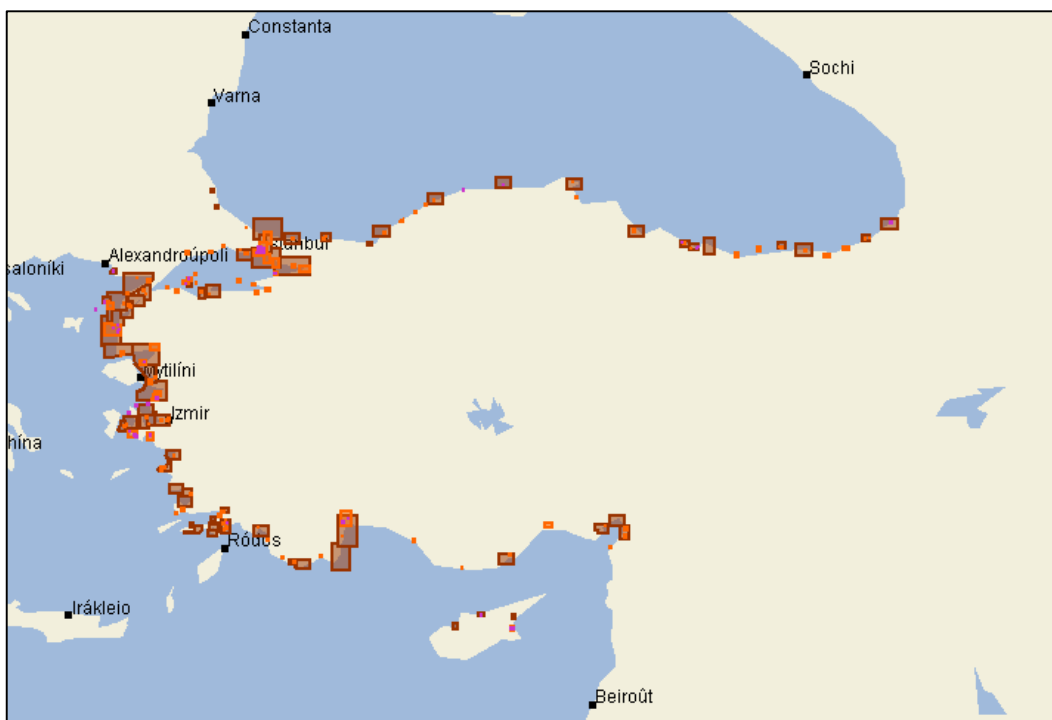
Turkish UB-1 ENC Coverage



Turkish UB-2 ENC Coverage



Turkish UB-3 ENC Coverage



Turkish UB-4,5,6ENC Coverage

b. ENC distribution method:

Turkish ENCs are being distributed through IC-ENC, one of the RENCs.

c. RNCs:

No RNC production.

d. INT Charts:

No INT Charts production.

e. National paper charts:

(1) 1new chart has been issued since the XIXthMBSHC.

Chart No.	Scale	IssueDate
8007	50,000	23/01/2016

(2) 15 new edition charts have been issued since the XIXth MBSHC.

Chart No.	Scale	New Edition Date
223	100,000	22/08/2015
14A	300,000	15/10/2016
35	300,000	15/10/2016
292	100,000	15/10/2016

2924	Plan Charts	15/10/2016
311	100,000	15/10/2016
2136	50,000	25/06/2016
133	100,000	25/06/2016
132	100,000	25/06/2016
2151	7,500	30/07/2016
1131	25,000	30/01/2016
2926	25,000	30/01/2016
213	100,000	20/05/2017
324	100,000	24/09/2017
2246	25,000	20/05/2017

g. Problems encountered:

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4. New publications & updates:

a. New publications:

No.	Type	Title
1	NP	<i>Annual Notice to Mariners 2016</i>
2	NP	<i>Annual Notice to Mariners 2017</i>
3	NP	<i>Nautical Almanac 2016</i>
4	NP	<i>Nautical Almanac 2017</i>

b. Updated publications:

No.	Type	Title
1	NP	<i>Catalogue of Charts and Nautical Publications</i>
2	NP	<i>Ports Regulation</i>
3	NP	<i>Symbols Abbreviations Terms Used on Charts</i>
4	NP	<i>List of Lights and Fog Signals</i>
5	NP	<i>Turkish Straits Navigation Guide</i>

c. Means of delivery:

Publications are being delivered in paper form.

d. Problems encountered :

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5. MSI:

a. Existing infrastructure for transmission:

Turkey, with its four NAVTEX stations (İstanbul, Samsun, İzmir and Antalya) has been areliable provider of Maritime Safety Information (MSI) since 1987. HF NBDP system has been usedin Istanbul NAVTEX station in

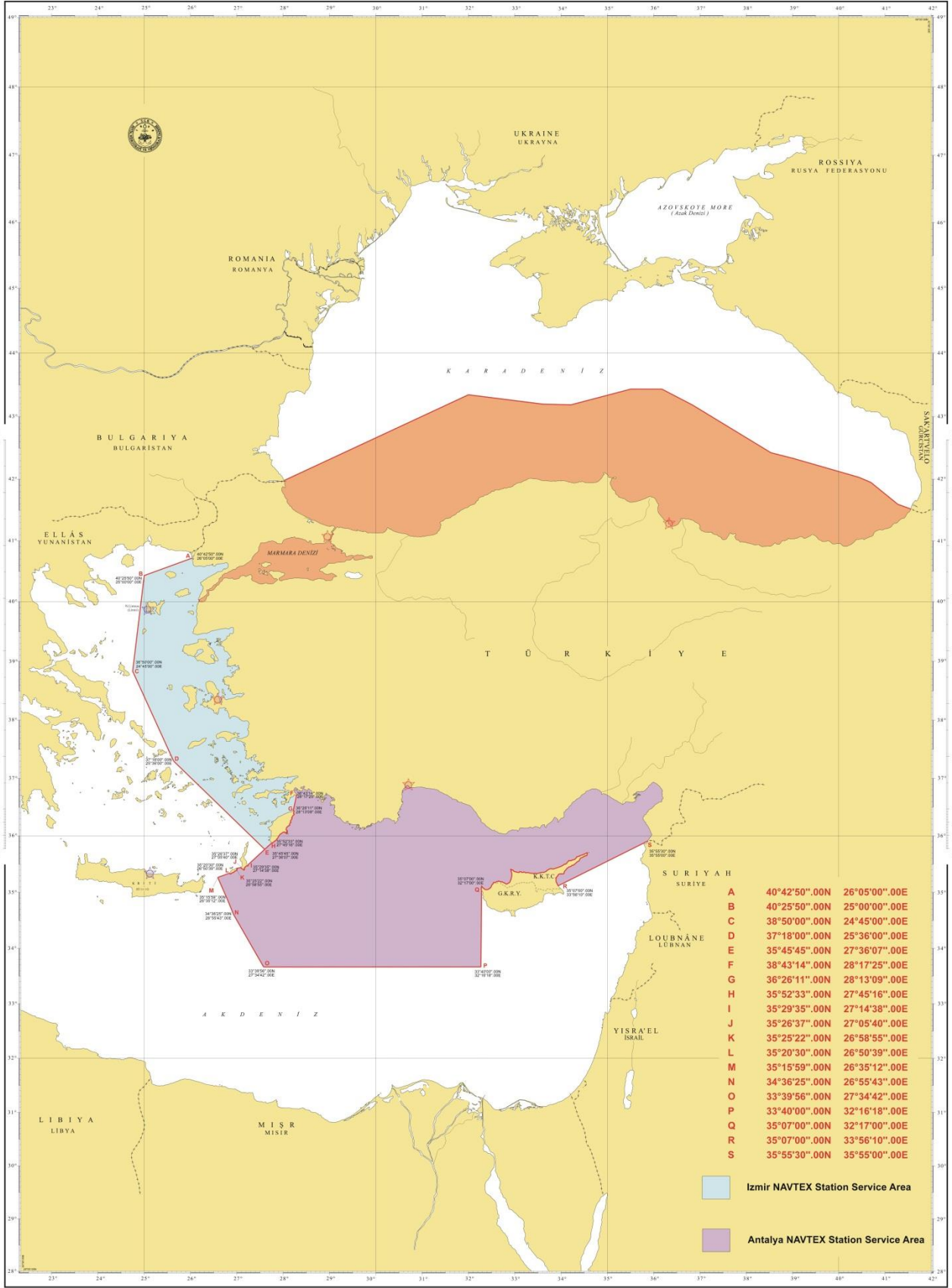
order to increase its coverage area. Modernization of NAVTEX stations and MF systems were accomplished in 2004, rendering these infrastructures capable for remote control from Istanbul Control Centre.

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.

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
2015	1198	51
2016	896	73
2017 (as of 14 Jun)	618	73



Turkish NAVTEX Service Areas

b. New infrastructure in accordance with GMDSS:

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c. Master Plan:

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d. Problem Encountered:

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6. C-55:

Latest update is on 18 September 2013.

7. Capacity Building:

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

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b. Training received, needed, offered :

(1) In 2009 Middle East Technical University and in 2011 TN-ONHO's Hydrography Course CAT-B were recognized by FIG/IHO/ICA International Board on Standards of Competence for Hydrographic Surveyors and Nautical Cartographers (IBSC).

(2) Since last meeting one course in TN-ONHO is held between September 2015 and February 2016. Next Hydrography Course CAT-B in TN-ONHO is planning between September 2017 and February 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 UKHO (UK), SHOM (FR), BSH (DE) and MHD(RO); and bilateral agreements with Russian Federation, Ukraine and Azerbaijan are under progress.

d. Definition of bids to IHO CBSC:

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8. Oceanographic activities:

a. General :

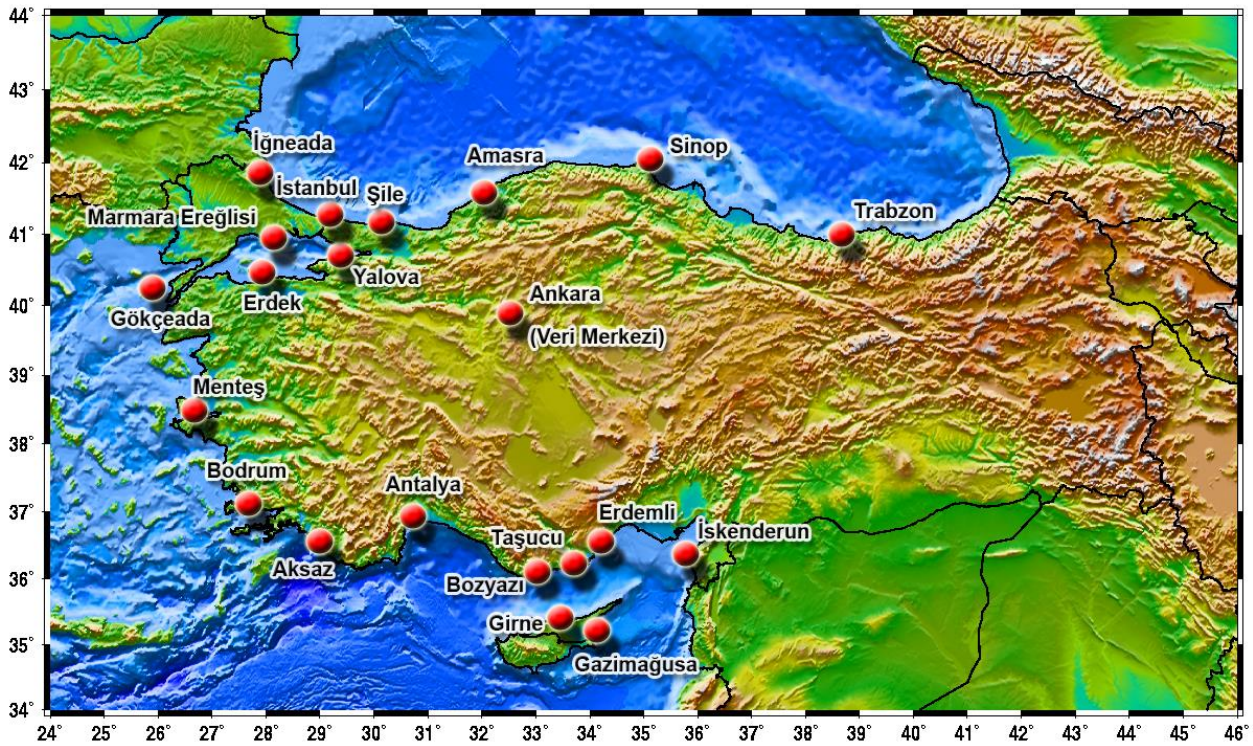
Currently TN-ONHO has an active oceanographic branch that can conduct oceanographic, geological and geophysical surveys. Collected data is processed and used for navigational purposes. TNONHO has a geology lab as well to analyze the sediment samples for particle size. TN-ONHO provides operational environmental support to the end users recently.

b. GEBCO/IBC's activities:

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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 new project of fixed GNSS integrated RADAR level measuring tide gauges established at Sinop and İskenderun.

9. Other activities:

a. Participation in IHO Working Groups:

TN-ONHO has participated in the following IHO events since XIXth MBSHC meeting:

- WWNWS-6 meeting (August 2015)
- HSSC-7 meeting (November 2015)
- WENDWG-6 meeting (March 2016)
- BASWG-13 meeting (May 2016)
- CBSC-14 meeting (May 2016)
- NCWG-2 meeting (April 2016)
- HSSC-8 meeting (November 2016)
- Technical Visit to Montenegro (November 2016)
- Technical Visit to Albania (December 2016)
- WENDWG-7 meeting (January 2017)
- S100 WG-2 meeting (March 2017)
- ENCWG-2 meeting (March 2017)
- IHO Assembly-1 (April 2017)
- NCWG-3 meeting (May 2017)
- CBSC-15 meeting (June 2017)

b. Meteorological data collection:

TN-ONHO has meteo stations and collects basic meteorological parameters. Meteorological and Oceanographic atlases of the seas around Turkey have been published. As the datasets get bigger the atlases are renewed with latest statistical analysis.

c. Geospatial studies:

Chart Display and Information System (DEHABSUS) has been established in March 2015. DEHABSUS is a "google earth" like GIS displaying charts, vector Layers, navigational warnings and other geospatial data on a 3D globe. By the time being, it is open only to military users.

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.

e. Environmental protection

Ministry of Environment conducts long term monitoring activities around Turkish Coasts to monitor 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.

f. Astronomical observations

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g. Magnetic/Gravity surveys

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h. Other :

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