11th Meeting of the BASWG
19-20 June 2013, Monaco

NATIONAL REPORT OF TURKEY

1. <u>Hydrographic Office / Service</u>: General, including updates for the IHO Yearbook e.g. reorganization

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, production of paper and Electronic Navigation Charts (ENC), nautical publications, weekly Notices to Mariners, Radio Navigational Warnings, Oceanographic (physical, chemical, geological, biological) and geophysical surveys and studies. Supply and maintenance of charts and publications.

TN-ONHO celebrated its 100th anniversary in 2009.

2. <u>Surveys</u>:

a. New surveys:

Hydrographic surveys made by TN-ONHO in the Black Sea since XVIIth MBSHC are listed below:

Year	***Multi Beam***	***Single Beam***
2011	*3*	*1*
2012	*1*	*3*
2013 (as of 30 May)	*1*	*1*

b. New technologies and /or equipment :

One Shallow Water Side-Scan Sonar System has been procured in 2013.

c. New ships :

NtR

d. Problems encountered :

NtR

3. <u>New charts & updates</u>:

a. ENCs :

280 ENCs have been planned and produced for the area of responsibility of TN-ONHO. 257 of them are available (Figure-1).

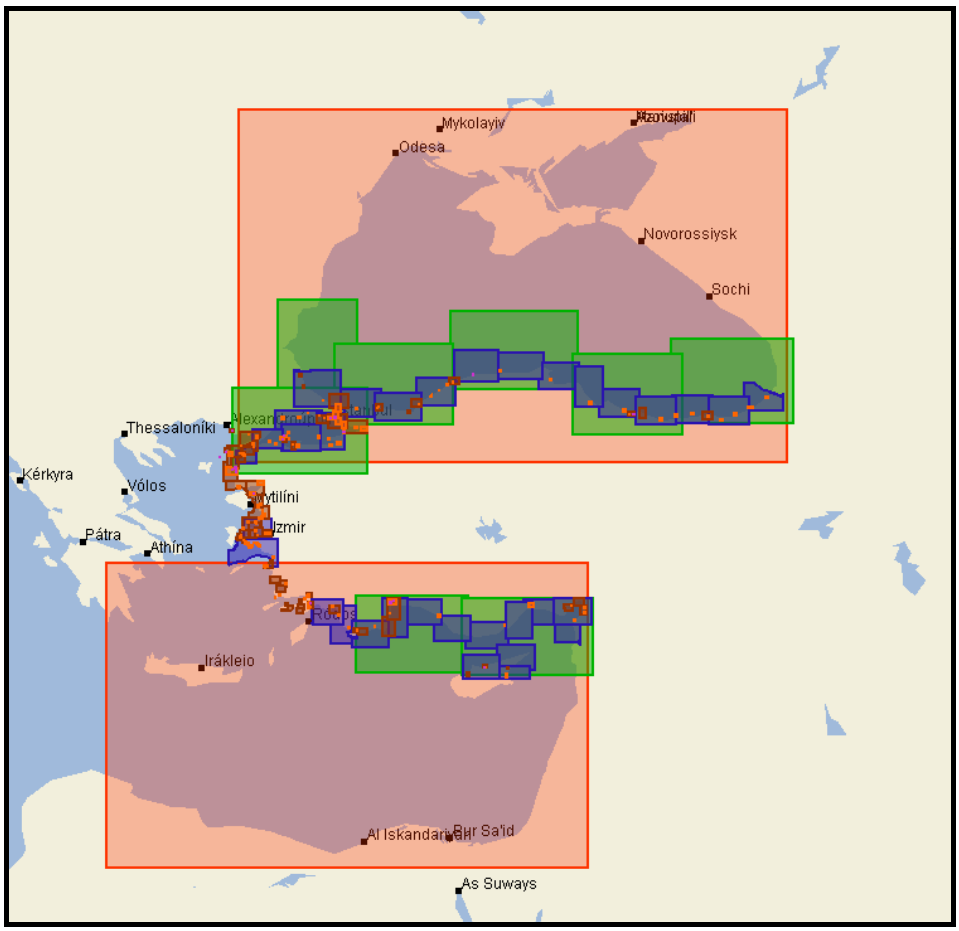

Figure-1
Current Turkish ENC Coverage Status.

b. ENC Distribution method :

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

c. RNCs :

TN-ONHO does not produce RNCs.

d. INT Charts :

(1) 8 new INT charts listed below proposed to be included in the MEDINTCHART scheme:

INT No	Producer	National No	Date		Scale		Format
			Publication	N.edition	1:	Latitude	
	TR	291	1966	2003	50 000	41°00'N	A0
	TR	292	1967	2000	100 000	40°40'N	A0
	TR	293	1963	1998	100 000	40°40'N	A0
	TR	2926	2002	-	25 000	40°58'N	A0
	TR	213	1967	2000	100 000	38°00'N	A0
	TR	2147	1990	-	50 000	39°00'N	A0
	TR	2234	2009	-	25 000	37°52'N	A0
	TR	3343	2007	-	25 000	36°51'N	A0

(2) 14 new edition of existing 25 INT charts have been issued since the XVIIth MBSHC. The list of those new editions are in article. 3.e.(2).

e. National paper charts :

(1) 5 new paper charts listed below have been issued since XVIIth MBSHC and 2 of them are in the Black Sea region:

National No	***Int No***	***Scale***	***Title***
1111		***25.000***	***Approach to Şile Port***
Plan A		***5.000***	***Şile Port***
1221		***12.500***	***Approach to İnebolu Port***
Plan A		***5.000***	***İnebolu Port***
2151		*10.000*	*Approach to Nemrut Port*
1312		*25.000*	*Approach to Samsun Port*
1432		*12.500*	*Pazar – Ardeşen*
Plan A		*4.000*	*Pazar Fishing Harbour*
Plan B		*4.000*	*Ardeşen Fishing Harbour*

(2) 59 new edition of the paper charts listed below have been issued since XVIIth MBSHC and 17 of them are in the Black Sea region:

National No	***Int No***	***Scale***	***Title***
10	***310***	***1.102.000***	***Blacksea***
10B		***750.000***	***West of Blacksea***
15		***400.000***	***Tuapse – Yatla***
17		***400.000***	***Mis Kinburn – Nos Kaliyakra***
22B		*300.000*	*Baba Cape – Kuşadası Gulf*
29	*3708*	*300.000*	*Marmara Sea*
32	*3600*	*300.000*	*Kaş – Anamur Cape*
33	*3602*	*300.000*	*Anamur Cape – Banyas*
34		*300.000*	*Cyprus Island*
36		*300.000*	*Hayfa – Bür Sa'id*
111		***100.000***	***İstanbul Strait – Kefken***
141		***100.000***	***Tirebolu – Trabzon***
152		***150.000***	***İdokopas Cape – Kerch Strait***
154		***150.000***	***Mehanom Cape – Khersones Cape***
193		***175.000***	***Taganrog Gulf***
211		*100.000*	*Gökçeada – Aleksandroupolis*
212	*3750*	*75.000*	*Çanakkale Strait*
215		*100.000*	*Dikili Gulf – İzmir Gulf*
221	*3784*	*75.000*	*İzmir Gulf*
291		*50.000*	*İzmit Gulf*
294		*100.000*	*Marmara Islands – İmralı Island*
295	*3752*	*75.000*	*Hoşköy – Gelibolu*
311		*100.000*	*Bodrum Channel – Marmaris*
333	*3656*	*100.000*	*İçek (Mersin) – Karataş Cape*
334	*3660*	*100.000*	*İskenderun Gulf*
344		*100.000*	*Aspro (White) Cape – Pyla (Pila) Cape*
345		*100.000*	*Aspro (White) Cape – Limniti Cape*
1231		***25.000***	***Approach to Sinop Port***
1321		***15.000***	***Approach to Ünye Port***
Plan A		***5.000***	***Ünye Port***
Plan B		***2.500***	***Ünye City Pier***

1421			***Blacksea Ports***
Plan A		***12.500***	***Approach to Sürmene Port***
Plan B		***12.500***	***Approach to Rize Port***
1431		***25.000***	***Approach to Hopa Port***
Plan A		***5.000***	***Hopa Port***
1722		***25.000***	***Köstence Port***
1811	***3758***	***50.000***	***Approach from North to İstanbul Strait***
1822			***Bulgaria – Romania Ports***
Plan A		***25.000***	***Varna***
Plan B		***7.500***	***Varna Port***
Plan C		***30.000***	***Sulina***
Plan D		***20.000***	***Mangalia***
1911		***50.000***	***Kerch Strait***
2134		*50.000*	*Anafartalar Bay – Tavşan Islands*
2147		*50.000*	*Çandarlı Gulf*
2148		*7.500*	*Ege Gaz and Total Oil Piers*
2150		*7.500*	*Aliağa Port*
2211		*25.000*	*North of Uzunada*
2212	*3785*	*25.000*	*Approach to İzmir Port*
Plan A		*12.500*	*Yenikale Channel*
Plan B		*10.000*	*İzmir*
Plan C		*10.000*	*İzmir Port*
2213		*25.000*	*Entrance to İzmir Gulf*
Plan A		*5.000*	*Urla Pier*
2214		*25.000*	*Gülbahçe Gulf*
2215			*Ports of İzmir Gulf and Eğriliman Channel*
Plan A		*12.500*	*Eğriliman*
Plan B		*25.000*	*Ormos Channel and Ormos Pahsa*
Plan C		*10.000*	*Karaburun*
Plan D		*5.000*	*Foça*
2223		*25.000*	*Gerence Gulf – Ildır Gulf*
Plan A		*12.500*	*Dalyanköy*
2246		*25.000*	*Kazıklı Port – Asin Gulf*
2911		*15.000*	*İzmit Port*
2921	*3756*	*30.000*	*İstanbul Strait*
2921A		*20.000*	*North of İstanbul Strait*
2921B		*20.000*	*South of İstanbul Strait*
2927		*7.500*	*Haydarpaşa Port – Salıpazarı Quay*
2929		*12.500*	*Anchorage of Southern Entrance of İstanbul Strait*
3110		*25.000*	*Bodrum Channel*
3121		*25.000*	*Approach to Marmaris Port*
3122		*25.000*	*Fethiye Gulf*
Plan A		*10.000*	*Göcek Port*
3212		*25.000*	*Ulu Cape – Geyikova Cape*
3221	*3653*	*25.000*	*Antalya*
Plan A		*5.000*	*Antalya Port*
Plan B		*2.500*	*Antalya Marina*
3341		*25.000*	*Yumurtalık Bay*
Plan A		*5.000*	*Yumurtalık*
3342	*3661*	*25.000*	*İskenderun - Yakacık*

g. Problems encountered :

NtR

4. <u>New publications & updates</u>:

a. New publications :

Type	***Title***
NP	*Annual Notice to Mariners 2011*
NP	*Annual Notice to Mariners 2012*
NP	*Nautical Almanac 2012*
NP	*Nautical Almanac 2013*

b. Updated publications :

Type	***Title***
NP	*List of Lights and Fog Signals*

c. Means of delivery :

Publications are being delivered in paper form.

d. Problems encountered :

NtR

5. <u>MSI:</u>

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 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 Center.

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***	***NAVAREA-III***
2011	*877*	*178*
2012	*863*	*168*
2013 (as of 30 May)	*349*	*48*

b. New infrastructure in accordance with GMDSS :

NtR

c. Master Plan :

NtR

d. Problem Encountered :

NtR

6. C-55:

Not updated recently as the new structure of C-55 is in progress. Latest update was on 27 February 2009.

7. Capacity Building:

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

NtR

b. Training received, needed, offered :

(1) In the 1st of October 2011, TN-ONHO's "Turkish Navy Hydrographic Course" recognized Category-B level by FIG/IHO/ICA International Board on Standards of Competence for Hydrographic Surveyors and Nautical Cartographers (IBSC).

(2) The first round of the course was held in the period 05 November 2012-12 April 2013 with participation of 11 trainees (6 from Turkey, 3 from Azerbaijan and 2 froö Turkmenistan).

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 and Ukraine are under progress.

d. Definition of bids to IHO CBSC :

NtR

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. The equipment inventory can be found at TN-ONHO web site (www.shodb.gov.tr). TN-ONHO 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 :

NtR

c. Tide gauge network :

There are three tide gauges operated by TN-ONHO. They are located in the southern and northern entrances of the Istanbul Strait and one in the Golden Horn (an estuary in the European side of Istanbul). The locations of the gauges can be seen in Figure 2. They are leveled with respect to the National datum, and transmit the collected water level data in real time thru GPRS connection. Additional meteo data (ie. atmospheric pressure and wind) and some physical oceanographic data is collected at the tide gauges as well.

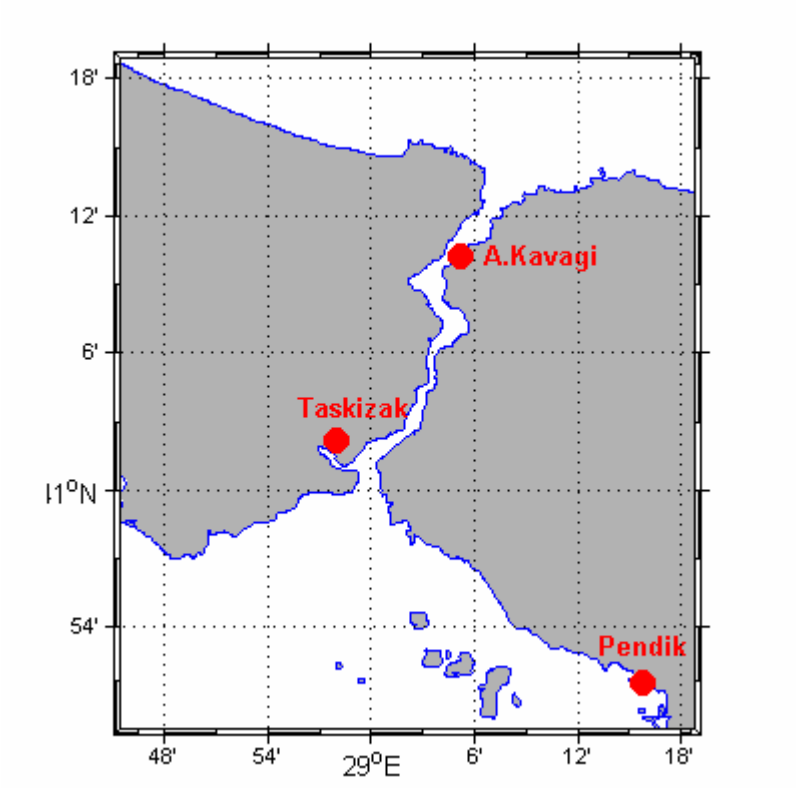

Figure-2
The locations of the Mareograph stations in the Strait of Istanbul.

b. New equipment :

TN-ONHO has deployed three wave buoys in the surrounding seas to monitor the environmental conditions. The buoys are placed to Black Sea entrance of Istanbul Strait, entrance of Izmir Bay and Marmaris Bay. An automatic meteorological station is also placed to a land location near each wave buoy. All the METOC data is stored in a computer in the field and transmitted to TN-ONHO headquarters in real time.

b. Problems encountered :

NtR

9. Other activities:

a. Participation in IHO Working Groups:

TN-ONHO has participated the following IHO events since XVIIth MBSHC Conference:

- 3rd HSSC meeting (November 2011)
- 3rd WWNWS meeting (September 2011)
- 23rd TSMAD meeting (January 2012)
- 10th CBSC meeting (June 2012)
- 6th DQWG meeting (July 2012)
- 2nd WENDWG meeting (September 2012)
- 4th HSSC meeting (September 2012)
- 4th WWNWS meeting (September 2012)
- 9th CSPCWG meeting (November 2012)
- 25th TSMAD meeting (January 2013)
- 3rd WENDWG meeting (May 2013)
- 11th CBSC meeting (May 2013)
- 5th IRCC meeting (June 2013)

b. Meteorological data collection :

TN-ONHO has meteo stations on her survey ships and 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.

c. Geospatial studies :

The CORS-TR project is operational since 2009. With this project, Turkey is now covered with 147 fixed GPS stations which transmit RTK corrections to the GPS receivers via GSM line for geodetic surveys.

d. Disaster prevention :

Turkey participates the Tsunami Warning System efforts conducted under the Intergovernmental Oceanographic Commission of UNESCO frame.

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

NtR

g. Magnetic/Gravity surveys

NtR

h. Other :

Establishment of TSS and VTS are underway in the Izmit Bay, Izmir Bay, Iskenderun Bay, Mersin Harbour and the Aliaga/Nemrut Harbour in order to coordinate and control the vessel traffic and to improve the safety of navigation in accordance with national and international rules and regulations.