

IHO
MEDITERRANEAN AND BLACK SEA HYDROGRAPHIC COMMISSION
(MBSHC)

20th Meeting, 4 - 6 July 2017, Herceg Novi, Montenegro.

NATIONAL REPORT ITALY

1. Hydrographic Office/Service

The Italian Hydrographic Institute, IIM, has its headquarters in Genoa. It is the national charting authority for the safety of navigation. Furthermore, it is in charge of the geospatial support to the Italian Navy and the Italian Ministry of Defense.

2. Surveys

a) Coverage of new surveys

Since 2015 systematic surveys have been conducted mainly in along the Eastern coast of Italy (Adriatic Sea), Sardinia (2015-2016) and the Tuscan Archipelago (2015-2017):

- Adriatic Sea: Monopoli, Otranto, Taranto, Calabrian coast, Venice, Chioggia, Tolle Harbour, Pescara, Falconara;
- Sardinia: Gulf of Congianus, Olbia, Maddalena Island;
- Tyrrhenian Sea : Giglio Island, Gorgona Island.

b) New technologies and /or equipment

- Between 2015 and 2016 ITS MAGNAGHI was equipped with new shallow water MBES EM 2040 and four MBES EM3002, installed on a/the/her small hydrographic boat, were updated with MBES EM 2040C;
- in 2016 a new Hydrographic R.H.I.B. (rigid-hulled inflatable boat) for surveys in very shallow water was acquired;
- in 2017 the IIM is preparing for LIDAR bathymetric coastal surveys.

c) New ships

- During 2016, OSV ALLIANCE was reflagged as Italian Navy Ship from CMRE (Centre for Maritime Research and Experimentation) being ready to conduct hydrographic campaigns along the Italian Coast and in Polar areas.
- The IIM is supporting the Italian Navy General Staff in the drawing up of technical-operational specifications for a new major hydro-oceanographic unit.

d) Problems encountered

Survey activities were carried out regularly.

3. New charts and updates

a) ENCs

The status of ENC production in the region is:

<i>Usage Bande</i>	<i>Produced Cells</i>	<i>Planned Cells</i>	<i>%</i>
1	3	3	100
2	2	2	100
3	69	69	100
4	64	68	94
5	121	127	95
6	5	6	83

Total	264	276	96
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Since the 19th conference, the following ENC cells have been produced:

– **New ENCs:**

<i>Name</i>	<i>Edition (date)</i>	<i>Scale</i>	<i>Title</i>	<i>Nav Purpose</i>	<i>N.E/N.C.</i>
IT400104	3^ (2015)	1 : 22 000	Approach to Savona	Approach	N.E.
IT4001066	5^ (2015)	1 : 22 000	Approach to Genova	Approach	N.E.
IT400107	4^ (2015)	1 : 22 000	From Nervi to Sestri Levante	Approach	N.E.
IT400298	3^ (2015)	1 : 45 000	Gulf of Palmas	Approach	N.E.
IT300005	5^ (2015)	1 : 90 000	Piombino Channel to Argentario	Coastal	N.E.
IT500216	1^ (2015)	1 : 4 000	Vasto Harbour	Harbour	N.E.
IT300027	4^ (2015)	1 : 90 000	Mouth of Sinni to Porto Cesareo	Coastal	N.E.
IT50214D	2^ (2015)	1 : 4 000	Pesaro Harbour	Harbour	N.E.
IT300028	3^ (2015)	1 : 90 000	Torre dell'Ovo to Torre dell'Orso	Coastal	N.E.
IT600224	1^ (2015)	1 : 3 000	Arsenale di Venezia	Berthing	N.E.
IT50259A	2^ (2015)	1 : 4 000	Favignana Harbour	Harbour	N.E.
IT500189	2^ (2015)	1 : 4 000	Otranto Harbour	Harbour	N.E.
IT500282	3^ (2015)	1 : 12 000	Anchorage between to Argentario	Harbour	N.E.
IT400256	3^ (2015)	1 : 22 000	Approach to Palermo	Approach	N.E.
IT500257	3^ (2015)	1 : 8 000	Trapani Harbour	Harbour	N.E.
IT50196A	2^ (2015)	1 : 5 000	Molfetta Harbour	Harbour	N.E.
IT50214A	2^ (2015)	1 : 5 000	Port of Civitanova Marche	Harbour	N.E.
IT600154	2^ (2016)	1 : 4000	Taranto harbuor –Arsenale-	Berthing	N.E.
IT500267	1^ (2016)	1 : 4000	Licata Harbour	Harbour	N.C.
IT300018	3^ (2016)	1 : 90000	Punta Biscione to Capo Bianco	Coastal	N.E.
IT50223A	3^ (2016)	1 : 8000	Malamoccco Harbour	Harbour	N.E.
IT50223B	2^ (2016)	1 : 8000	San Leonardo basin	Harbour	N.E.
IT500220	1^ (2016)	1 : 8000	Port of Chioggia	Harbour	N.C.
IT500286	3^ (2016)	1 : 8000	Porto Torres Harbour	Harbour	N.E.
IT500218	3^ (2016)	1 : 8000	Ravenna Harbour	Harbour	N.E.
IT500077	2^ (2016)	1 : 4000	Ports of Anzio and Nettuno	Harbour	N.E.
IT400247	2^ (2016)	1 : 22 000	Alicudi and Filicudi islands	Approach	N.E.
IT500226	4^ (2016)	1 : 8000	Venezia – Lido harbuor	Harbour	N.E.
IT300010	5^ (2016)	1 : 90000	Licola to Agnone including Ischia,	Coastal	N.E.
IT40240A	2^ (2016)	1 : 22000	Lampedusa isle	Approach	N.C.
IT50240B	2^ (2016)	1 : 8000	Lampedusa Harbour	Harbour	N.C.
IT300012	3^ (2016)	1 : 90000	Cape Tirone to Briatico	Coastal	N.E.
IT300013	3^ (2016)	1 : 90000	Cape Cozzo to Gioia Tauro Ecc..	Coastal	N.E.
IT400219	3^ (2016)	1 : 22000	Approach to Ravenna	Approach	N.E.
IT500225	2^ (2016)	1 : 8000	Venezia - Marghera Nord	Harbour	N.E.
IT500209	4^ (2016)	1 : 4000	Ancona Harbour	Harbour	N.E.
IT500058	2^ (2016)	1 : 8000	Marconi Gulf (Gulf of Tigullio)	Harbour	N.E.
IT500212	3^ (2016)	1 : 12 000	Ortona Harbour	Harbour	N.E.
IT400222	5^ (2016)	1 : 40000	Approach to Venezia	Approach	N.E.
IT50075A	3^ (2016)	1 : 4000	Fiumicino Harbour	Harbour	N.E.
IT400124	3^ (2017)	1 : 22000	Approach to Fiumicino	Approac	N.E.
IT500209	4^ (2016)	1 : 4000	Ancona Harbour	Harbour	N.E.
IT500214A	3^ (2016)	1 : 4000	Port of Civitanova Marche	Harbour	N.E.
IT50214B	2^ (2016)	1 : 4000	Fano Harbour	Harbour	N.E.
IT400293	3^ (2016)	1 : 45000	Gulf of Oristano	Approach	N.E.
IT50241C	2^ (2016)	1 : 4000	Giulianova Harbour	Harbour	N.E.
IT50214D	2^ (2015)	1 : 4000	Pesaro Harbour	Harbour	N.E.
IT50214E	2^ (2016)	1 : 4000	Senigallia Harbour	Harbour	N.E.
IT400210	6^ (2017)	1 : 22000	Approach to Ancona	Harbour	N.E.
IT300036	6^ (2016)	1 : 90000	Numana to Fano	Coastal	N.E.
IT50075A	3^ (2016)	1 : 4000	Fiumicino Harbour	Harbour	N.E.
IT50075B	2^ (2016)	1 : 4000	San Felice Circeo Harbour	Harbour	N.E.
IT50075C	2^ (2016)	1 : 4000	Santa Marinella Harbour	Harbour	N.E.

IT50075D	2^ (2016)	1 : 4000	Terracina Harbour	Harbour	N.E.
IT40240A	2^ (2016)	1 : 22000	Lampedusa Isle	Approach	N.E.
IT50240B	2^ (2016)	1 : 8000	Lampedusa Harbour	Harbour	N.E.
IT40243A	1^ (2016)	1 : 22000	Linosa Isle	Approach	N.C.
IT50243B	1^ (2016)	1 : 8000	Pozzolana Port	Harbour	N.C.
IT50243C	1^ (2016)	1 : 8000	Scalo Vechio Port	Harbour	N.C.
IT300038	6^ (2017)	1 : 90000	Sacca del Canarin to Porto	Coastal	N.E.
IT400130	6^ (2017)	1 : 22000	Approach to Napoli	Approach	N.E.
IT500054	4^ (2017)	1 : 8000	Genova Harbour –West Side-	Harbour	N.E.
IT500055	7^ (2017)	1 : 8000	Genova Harbour –East Side-	Harbour	N.E.
IT400106	6^ (2017)	1 : 22000	Approach to Genova	Approach	N.E.
IT300003	5^ (2017)	1 : 90000	Pieve Ligure to S. Rossore	Coastal	N.E.
IT400138	4^ (2017)	1 : 22000	Straits of Messina	Approach	N.E.
IT400124	3^ (2017)	1 : 22000	Approach to Fiumicino	Approach	N.E.
IT40126A	2^ (2017)	1 : 22000	Pontine Islands: Ponza, Palmarola	Approach	N.E.
IT40126B	2^ (2017)	1 : 22000	Pontine Islands: Ventotene and S.	Approach	N.E.
IT400210	6^ (2017)	1 : 22000	Approach to Ancona	Approach	N.E.
IT400129	4^ (2017)	1 : 22000	Ischia and Procida Channels	Approach	N.E.
IT400248	2^ (2013)	1 : 22000	Salina, Lipari, Vulcano Island	Approach	N.E.
IT400249	1^ (2017)	1 : 22000	Panarea and Stromboli Islands	Approach	N.E.
IT50082E	1^ (2005)	1 : 4000	Ponza Harbour	Harbour	N.E.

– **In progress:**

<i>Name</i>	<i>Scale</i>	<i>Title</i>	<i>Nav Purpose</i>	<i>N.E/N.C.</i>
IT500071	8.000	Piombino Roadstead and Harbour	Harbour	N.E.
IT500084	8.000	Napoli Harbour	Harbour	N.E.
IT500311	8.000	Cagliari Harbour	Harbour	N.E.
IT600281	4.000	La Maddalena and S. Stefano	Berthing	N.E.
IT500094	4.000	Torre Annunziata Harbour	Harbour	N.E.
IT500095	4.000	Castellammare di Stabia Harbour	Harbour	N.E.
IT500062	8.000	Livorno Harbour	Harbour	N.E.
IT600059	4.000	La Spezia Harbour	Berthing	N.E.
IT40204A	22.000	Tremi Isles	Approach	N.E.
IT50204B	4.000	Tremi Isles Anchorages	Harbour	N.E.
IT50204C	4.000	Pianosa Isle	Harbour	N.E.
IT300033	90.000	Lake of Lesina to Pescara	Coastal	N.E.
IT400264	22.000	Porto Empedocle Roads	Approach	N.E.
IT500225	8.000	Venezia – Marghera Nord	Harbour	N.C.
IT500211	4.000	Pescara Harbour	Harbour	N.E.
IT500212	12.000	Ortona Harbour	Harbour	N.E.
IT500213	3.000	San Benedetto del Tronto Harbour	Harbour	N.E.
IT500149	8.000	Gallipoli Harbour	Harbour	N.E.

b) ENC Distribution method

Italian cells are distributed through IC-ENC and Jeppesen Official ENC Service.

c) RNCs

N.A.

d) INT charts published

The status of INT charts production in the region is:

<i>Scale</i>	<i>Produced INT charts</i>	<i>Planned INT charts</i>	<i>%</i>
Small	9	11	82
Medium	11	17	64,7
Large	26	29	89,5
Total	46	52	88,5

It is worth mentioning that Italy and Tunisia are working on the co-production of the INT Chart 3210 (Benzart to K'Libia, Trapani and Pantelleria – at scale 1:250.000). The chart is now completed and it is under issuing process.

Since the 19th conference the following INT Charts have been produced:

– **INT Charts published:**

<i>INT n.</i>	<i>National n.</i>	<i>Title</i>	<i>N.E/N.C.</i>
3391	257	Porto di Trapani	N.C.
3392	256	Litorale di Palermo	N.E.
3361	54	Porto di Genova F. Ovest	N.E.
3362	55	Porto di Genova F. Est	N.E.
3360	106	Litorale di Genova	N.E.
3385	130	Litorale di Napoli	N.E.
3467	218	Porto di Ravenna	N.C.
3466	210	Litorale di Ancona	N.E.

– **INT Charts in progress:**

<i>INT n.</i>	<i>National n.</i>	<i>Title</i>	<i>N.E/N.C.</i>
3210	948	Da Banzart a K' Libia Trapani e Pantelleria	N.C.

e) National paper charts

Since the 19th conference the following National Charts have been produced:

– **National Charts published:**

<i>National n.</i>	<i>Title</i>	<i>N.E/N.C.</i>
1557	Stretto di Sicilia –I. Pelagie	N.C.
1556	Stretto di Sicilia –Pantelleria	N.C.
216	Porto di Vasto	N.C.
72	Rada di Portoferraio	N.C.
240	Isola di Lampedusa	N.C.
1558	Stretto di Sicilia – Area Sud Est	N.C.
1559	Stretto di Sicilia – Area Sud Ovest	N.C.
1560	Mar Ionio –Area Est	N.C.
1570	Stretto di Sardegna - Area Est	N.C.
189	Porto di Otranto	N.E.
299	Litorale di Cagliari	N.E.
154	Porto di Taranto (Arsenale)	N.E.
18	Da Marsala a Sciacca	N.E.
235	Litorale di Grado	N.E.
286	Porto di Porto Torres	N.E.
214	Porti Minori dell'Adriatico	N.E.
215	Porti Minori dell'Adriatico	N.E.
39	Da Punta Tagliamento a Pula	N.E.
1813	Stato dei Rilievi nei mari Italiani	N.E.
11	Da Punta Licosa a Diamante	N.E.
77	Porto di Anzio e Nettuno	N.E.
10	Da Ischia a Punta Licosa	N.E.
219	Litorale di Ravenna	N.E.
82	Porti delle Isole di Ponza –Ischia -Procida	N.E.
12	Da Diamante a Capo Cozzo	N.E.
13	Da Capo Cozzo a C. Milazzo e Stromboli	N.E.
14	Da Capo Milazzo a Capo D'Orlando e Isole Eolie	N.E.
82	Porti delle Isole di Ponza –Ischia -Procida	N.E.
37	Da Pesaro al Po di Goro	N.E.

222	Litorale di Venezia	N.E.
127	Golfo di Napoli	N.E.
9	Da C. Circeo a Ischia e Isole Pontine	N.E.
74	Porti dell' Argentario e dell' Isola del Giglio	N.E.
83	Porti minori della Campania da Miseno a Bagnoli	N.E.
209	Porto di Ancona	N.E.
58	Golfo Marconi	N.E.
132	Litorale di Salerno	N.E.
131	Penisola Sorrentina e Isola di Capri	N.E.
129	Canali d' Ischia e Procida	N.E.
75	Porti Minori del Lazio da S. Marinella a Terracina	N.E.
40	Da Cap Corse ad Alistro e all' Isola D'Elba	N.E.
38	Dal Po di Goro a Punta Tagliamento	N.E.
267	Porto di Licata	N.C.
M 1019	Carta Militare	N.C.
223	Porto di Malamocco	N.C.
220	Porto di Chioggia	N.C.
1000	Planisfero Terrestre	N.C.
1001	Planisfero del Fusi Orari	N.C.
247	Isole di Alicudi e Filicudi	N.C.
226	Venezia Porto di Lido	N.C.
243	Isola di Linosa	N.C.
124	Litorale di Fiumicino	N.E.
126	Isole Pontine	N.E.
248	Isola di Vulcano e Salina	N.C.

– **In progress:**

<i>National n.</i>	<i>Title</i>
71	Rada e Porto di Piombino
84	Porto di Napoli
311	Porto di Cagliari
281	Rada di La Maddalena e Santo Stefano
95	Porto di Castellammare di Stabia
62	Porto di Livorno
94	Porto di Torre Annunziata
59	Porto della Spezia
204	Isole Termiti e Pianosa
33	Dal Lago Di lesina a Ortona
225	Venezia –Margerà Nord
213	Porto di San Benedetto del Tronto
211	Porto di Pescara
212	Porto di Ortona
264	Rada di Porto Empedocle
149	Porto di Gallipoli

f) Other charts, e.g. for pleasure craft

Since the 19th conference the following pleasure craft paper charts have been produced:

– **New editions of pleasure craft paper charts:**

<i>Number</i>	<i>Title</i>	<i>Scale 1:</i>	<i>Edition date</i>
7357	Da Capo Spartivento a Punta Pirastu	1:50 000	ott-15
7358	Capo Teulada	1:50 000	ott-15
7359	Da Cala Su Trucco a Punta di Cala Piombo	1:50 000	ott-15
7360	Golfo di Palmas	1:30 000	ott-15
7302	Da Capo Noli a I. Bergeggi	1:30 000	nov-15
7007	Da Punta Mesco a Cinquale	1:100 000	dic-15

7008	Da Marina di Massa a Marina di Pisa	1:100 000	dic-15
7011	Da Marina di Cecina a Piombino	1:100 000	dic-15
7014	Da Piombino a Castiglione della Pescaia	1:100 000	dic-15
7026	Da Porto Badino a Scauri	1:100 000	ott-16
7029	Da Scauri a Licola	1:100 000	ott-16
7302	Da Capo Noli a I.Bergeggi	1:30 000	nov-15
7007	Da Punta Mesco a Cinquale	1:100 000	dic-15
7008	Da Marina di Massa a Marina di Pisa	1:100 000	dic-15
7011	Da Marina di Cecina a Piombino	1:100 000	dic-15
7014	Da Piombino a Castiglione della Pescaia	1:100 000	dic-15
7026	Da Porto Badino a Scauri	1:100 000	dic-15
7029	Da Scauri a Licola	1:100 000	dic-15
7060	Da Castello di Falconara a Scoglitti	1:100 000	dic-15
7061	Da Punto Braccetto a Punta Raganzino	1:100 000	dic-15
7076	Da Marina di Ginosa a Torre Zòzzoli	1:100 000	feb-16
7077	Da Punta di Saguerra a Torre Chianca	1:100 000	feb-16
7078	Da Torre Chianca a Torre Mozza	1:100 000	feb-16
7079	Da Torre Suda a Torre di Andrano	1:100 000	feb-16
7081	Da S. Cataldo a Casalabate	1:100 000	feb-16
7080	Dal Porticciolo di Tricase a Torre S. Foca	1:100 000	feb-16
7435	Da Capo Mongerbino a Casteldaccia	1:30 000	feb-16
7436	Golfo di Palermo	1:30 000	feb-16
7437	Da Capo Gallo a Punta Priola	1:30 000	feb-16
7355	Litorale di Cagliari	1:30 000	feb-16
7356	Litorale di Cagliari - Installazioni	1:30 000	feb-16
7051	Da Torre Scibiliana a Punta Pizzolungo	1:100 000	apr-16
7053	Da Capo Lilibeo a Capo Granitola	1:100 000	apr-16
7054	Da Tre Fontane a Capo della Secca	1:100 000	apr-16
7058	Da Capo della Secca a Punta Bianca	1:100 000	apr-16
7003	Da Loano a Savona	1:100 000	apr-16
7004	Da Savona a Quinto al Mare	1:100 000	apr-16
7322	Canale di Piombino	1:30 000	mag-16
7408	Da Positano ad Amalfi	1:30 000	mag-16
7530	Litorale di Grado	1:15 000	mag-16
7001	Da Capo Mortola a Capo Berta	1:100 000	giu-16
7315	Secche della Meloria	1:30 000	ago-16
7316	Litorale di Livorno	1:30 000	ago-16
7318	Da P.ta Castiglioncello a Vada	1:30 000	ago-16
7319	Da Vada a Marina di Cecina	1:30 000	ago-16
7324	Da Scaglieri a Monte Grosso	1:30 000	ago-16
7530	Litorale di Grado	1:15 000	nov-16
7342	Lido di Ostia	1:30 000	feb-17
7029	Da Scauri a Licola	1:100 000	ott-16
7028	Isola di Ventotene e Scoglio la Botte	1:100 000	nov-16
7027	Isole Pontine	1:100 000	nov-16
7026	Da Porto Badino a Scauri	1:100 000	ott-16
7025	Capo Circeo	1:100 000	nov-16
7024	Da Lido dei Pini a Lago di Capracole	1:100 000	nov-16
7530	Litorale di Grado	1:15 000	nov-16
7036	Da Isolotto di Cirella a Paola	1:100 000	dic-16
7037	Da Paola a C. Suvero	1:100 000	dic-16
7038	Da C. Suvero a C. Cozzo	1:100 000	dic-16
7039	Da Tropea a Bagnara Calabria	1:100 000	dic-16
7041	Da Rometta Marea a C. Calavà	1:100 000	dic-16
7043	Stromboli e Panarea	1:100 000	dic-16
7066	Da C. S. Andrea a Melito di Porto Salvo	1:100 000	gen-17
7030	Ischia e Napoli	1:100 000	gen-17
7031	Da Pozzuoli a Positano	1:100 000	gen-17
7032	Golfo di Salerno	1:100 000	gen-17
7033	Da Agropoli a Casal Velino	1:40 000	gen-17

7034	Da Fiume Alento a Punta delle Grive	1:100 000	gen-17
7367	Da Porto Palma a Stagno Corru de S'Ittiri	1:40 000	gen-17
7368	Golfo di Oristano	1:40 000	gen-17
7401	Rada di Napoli	1:30 000	gen-17
7402	Da Portici a Torre del Greco	1:30 000	gen-17
7114	Da Eraclea Mare a Lignano Sabbiadoro	1:100 000	feb-17
7505	Litorale di Ravenna	1:30 000	feb-17
7341	Litorale di Fiumicino	1:30 000	feb-17
7342	Lido di Ostia	1:30 000	feb-17
7035	Da Punta di Mezzanotte a Capo Tirone	1:100 000	mar-17
7111	Dal Po di Goro al Po di Levante	1:100 000	mar-17
7113	Da Lido a Caorle	1:100 000	mar-17
7392	Isola di Palmarola	1:100 000	mar-17
7393	Isola di Ponza	1:30 000	mar-17
7394	Isola di Zannone	1:30 000	mar-17
7395	Dall'Isola di Ponza allo Scoglio della Botte	1:30 000	mar-17
7396	Isole di Ventotene e S. Stefano	1:30 000	mar-17
7040	Stretto di Messina	1:100 000	mar-17
7042	Vulcano, Lipari, Salina e Panarea	1:100 000	apr-17
7045	Da S.Stesano di Camastra a C. Piraino	1:100 000	apr-17
7112	Da Porto Levante a Lido	1:100 000	apr-17
7510	Da Porto Levante a Porto Fossone	1:50 000	apr-17
7511	Litorale di Chioggia	1:50 000	apr-17
7512	Porto di Malamocco	1:50 000	apr-17
7513	Litorale di Venezia	1:50 000	apr-17
7004	Da Savona a Quinto al Mare	1:100 000	mag-17
7005	Da Genova a Riva Trigoso	1:100 000	mag-17
7013	Isola D'Elba	1:100 000	mag-17
7404	Da Marina di Meta a Sorrento	1:30 000	mag-17
7304	Da Albissola Marina a Cogoleto	1:30 000	mag-17
7305	Da Arenzano a Genova Ovest	1:30 000	mag-17
7306	Genova	1:30 000	mag-17
7307	Da Quarto dei Mille a P.ta della Chappa	1:30 000	mag-17
7407	Da Punta di Montaldo a Punta S. Elia	1:30 000	mag-17
7408	Da Positano ad Amalfi	1:30 000	mag-17
7409	Da Amalfi a Cetara	1:30 000	mag-17
7410	Litorale di Salerno	1:30 000	mag-17
7115	Da Grado a Trieste	1:100 000	mag-17
7108	Da Casteldimezzo a Cesenatico	1:100 000	mag-17
7501	Litorale di Ancona	1:30 000	mag-17
7403	Da Torre Annunziata a Vico Equense	1:30 000	mag-17
7405	Da Punta Campanella all' Isola di Capri	1:30 000	mag-17
7406	Isola di Capri	1:30 000	mag-17

g) Problems encountered

Italy doesn't issue Temporary and Preliminary notices for charts and ENC's (T&P - compliant with IHO publication S-4 Part B-600 "Chart maintenance") due to limitations of our current software in managing T&P correctly. However, information was provided to mariners via the Italian NtM Booklet in the section C1 "Nautical Information". Since last year, the information contained in the section C1 have been progressively cancelled. Updates are provided via temporary notices for Sailing Directions and for List of Lights.

We are changing our workflow, implementing new software and a geographic database. We expect to be fully compliant with S-4 specifications for T&P next year.

As regards ENC overlapping issues, which are in the top priority list of Italian interests, Italy and Croatia are working on a common agreed solution in the Adriatic Sea.

As regards overlapping in the Black Sea with the Turkish ENC's, Italy is open to all possible mutually satisfactory solutions starting from the last Medintchart coordinator proposal.

4. New publications & updates

Since the 19th conference the following publications have been produced:

a) New publications

Annual

<i>Number</i>	<i>Title</i>	<i>Edition</i>
I.I. 3132	EFFEMERIDI NAUTICHE 2016	2016
I.I. 3132	EFFEMERIDI NAUTICHE 2017	2017
I.I. 3133	TAVOLE DI MAREA 2016	2016
I.I. 3133	TAVOLE DI MAREA 2017	2017
I.I. 2024	L'AGENDA NAUTICA 2016	2016
I.I. 2024	L'AGENDA NAUTICA 2017	2017

Sailing Directions

<i>Number</i>	<i>Title</i>	<i>Edition</i>
I.I. 3201	PORTOLANO P2	2017
I.I. 3208	PORTOLANO P3	2016

List of Lights

<i>Number</i>	<i>Title</i>	<i>Edition</i>
I.I. 3134	ELENCO FARI E SEGNALI DA NEBBIA DA CANNES (FRANCIA) A SARANDA (ALBANIA)	2016

List of Radio Signals

<i>Number</i>	<i>Title</i>	<i>Edition</i>
I.I. 3134	RADIOSEVIZI PER LA NAVIGAZIONE – PARTE I	2017

Miscellaneous

<i>Number</i>	<i>Title</i>	<i>Edition</i>
I.I. 3001	CATALOGO GENERALE DELLE CARTE E DELLE PUBBLICAZIONI NAUTICHE	2016
I.I. 3001	CATALOGO GENERALE DELLE CARTE E DELLE PUBBLICAZIONI NAUTICHE	2017

b) Updated publications

Publications are updated via the NtM (Fascicolo Avvisi ai Naviganti) booklet which can also be downloaded free of charge from the IIM section in the Italian Navy Official Website.

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

All publications are available on paper. Italy is working on the Digital Sailing Directions project.

d) Problems encountered

NTR.

5. MSI

a) Existing infrastructure for transmission

The Coast Guard is the Italian entity in charge of GMDSS and Navtex

Coordinator. Navtex has been operational since April 2002 on freq. 518 kHz (in English and Italian). Since 2012 it has been operational with 3 stations (La Maddalena, Mondolfo and Sellia Marina); efficiency and reliability are very good. Since May 2015 a new station has been operational in Piombino on frequency 490 kHz (in English). The local dissemination of information is very good and is guaranteed by VHF radio communications and written documents.

b) New infrastructure in accordance with GMDSS

N.A.

c) Master Plan

N.A.

d) Problems encountered

NTR.

6. S-55

a) Latest update (31 December 2016)

<i>Nation/Area</i>	<i>A1</i>	<i>A2</i>	<i>B1</i>	<i>B2</i>	<i>C1</i>	<i>C2</i>
ITALY	73.2%	53.2%	23.2%	46.3%	3.6%	0.5%

The areas and main harbours which have not been systematically surveyed are our top priority.

7. Capacity Building

a) Offer of and/or demand for Capacity Building

Applications must be submitted to the Italian Ministry of Defense.

Italy, in the last 20 years has established some capacity building projects in the Mediterranean Sea as follows:

- Albania: from 1998, originated by a IHO project for constitution and improvement of a national hydrographic service. The project was based on:
 - o Nautical charts and Publication production;
 - o MSI infrastructure establishment;
 - o Hydrographic surveys and data validation;
 - o Aids to Navigation establishment;
 - o Hydrographic launch, instruments and material provision.
- Lybia: from 1999 on the base of a bilateral agreement some activities were executed as follows:
 - o Specialistic education and training;
 - o Theoretical-practical hydrographic and cartographic activities;
 - o Hydrographic surveys in Lybia performed by Italian Hydrographic vessels;
 - o Support to Hydrographic Service rules and standards production;
 - o Tripoli Nautical Chart and ENC production.

The project, that included instruments and material provision, was interrupted due to the unstable political situation incurred in Lybia from 2011.

- Lebanon: the project is part of the UN “International Support Group” initiative for the country stabilization. It started in 2014 as a multinational program, leaded by IIM and financed by Italian Ministry of Defense and it is in the 3rd year of

development (the end of the project is estimated in 2020). It is composed by:

- Education and training (cat. A, cat B courses in Italy, training on the job modules in Italy and Lebanon);
- Hydrographic launch and boats provision, hydrographic, oceanographic and topographic instruments and material provision and relative trainings;
- Capacity development in the fields of acquisition, validation and charting processes in order to create a cartographic production infrastructure;
- Support for a MSI infrastructure establishment;
- Combined Support for a geodetic/altimetry net establishment;
- Joint/combined geodetic surveys execution.

b) Training received, needed, offered

Presently, IIM offers training courses for hydrographers:

- Category A course: Master in Marine Geomatics open to military and civilian personnel;
- Category B course: recognized by the FIG/IHO/ICA International Board in 2009 open to military and civilian personnel;
- Cartographic trainings organized on specific modules and on demand (ex. Military cartography for Bangladesh Navy, cartographic tools for Albanian Geographic Institute, both in 2017).

All courses are in English, to give students from all over the world the opportunity to train at IIM and to make Italian students more proficient in English.

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

i. Hydrographic/Cartographic data exchange agreements in force:

Tunisia:

The agreement was stipulated in 2009 and concerns on data exchange and technical assistance in the fields of hydrography, oceanography, cartography and education. The Italian Hydrographic Institute and the Tunisian Hydrographic Office are co-producing two INT charts (paper chart and ENC) of the Strait of Sicily (INT 3210 and INT 3212); Hydrographic Expert meetings were held in Bizerte/Tunisia (2016) Genoa/Italy (2017) to finalize the production of chart INT 3210 that will be released soon and will be presented during MBSHC 20 as an example of cartographic cooperation between Mediterranean countries.

Israel:

The agreement was stipulated in 2016 and concerns cooperation in the field of geospatial information. In particular, it covers data and products exchange, training, technical assistance, technical publications and reports an activities agreed case-by-case. A bilateral meeting was held in Genoa on november 2016.

Croatia:

A bilateral agreement in the field of hydrography, nautical documentation and maritime safety information between HHI and IIM is in progress. The agreement is focused on charts co-production (other positive example of cartographic cooperation between Mediterranean border countries) and overlaps solving.

ii. Hydrographic/Cartographic cooperation in force:

Libya:

A number of hydrographic surveys were carried out in 2005 and 2007 and the cooperation for the chart of the Tripoli Harbour went on until 2010. The works were resumed after the political situation in Libya became stable. Hydrographers from both countries met in Rome in June 2013 but no particular activity was still

performed.

Lebanon:

Two annual meetings were held in Italy and Lebanon Beirut in 2015 and 2016. An expert hydrographic meeting was held in Rome beside Italian/Lebanon Staff Talks in April 2017 to confirm the capacity building project road map for 2017.

Italian contribution til now to the multinational ISG initiative (UK, France, Italy, Turkey, etc.) as follows:

- Education: courses for nr. 7 officers/petty officers (cat. A and B);
- Training/Stages: hydrographic, cartographic and topographic trainings in Italy and Lebanon. Operational stages performed.
- Means and instruments provision (n. 1 survey launch fully equipped, n. 1 hydrographic speedboat fully equipped, positioning systems, mareometers, topographic instruments, oceanographic devices, software, etc.);
- ITS Magnaghi visit for joint surveys in Lebanon planned on September 2017.

iii. Visit to the Italian Hydrographic Institute for hydrographic/cartographic purposes:

2015

Hydrographic experts from Israeli Navy Hydrographic Service, Lebanese Armed Forces (LAF), Tunisian Navy Hydrographic and Oceanographic Service.

2016

Hydrographic experts from Israeli Navy, Hydrographic Lebanese Armed Forces (LAF), Bangladesh Hydrographic Service, Albanian Hydrographic Service, Royal Moroccan Hydrographic Service, Japanese Hydrographic Service, Tunisian Navy Hydrographic and Oceanographic Service.

2017

Hydrographic Lebanese Armed Forces (LAF), Albanian Geographic Institute, Chinese Hydrographic Service, Japanese Hydrographic Service, Tunisian Navy Hydrographic and Oceanographic Service, Montenegro Hydrographic experts.

d) Development projects with hydrographic component (In progress, planned, under evaluation or study)

The IIM has changed its chart production system based on a product-oriented philosophy to a more suitable data-centric architecture. This system allows a more efficient paper charts, ENC's, Nautical publications and NtMs production, from the same database. This transition is a complex and long process, still not completed.

IIM is also searching for the best option to automatize the Pilots/Sailing Directions ("Portolano del Mediterraneo") in order to obtain an interactive and modern product.

In 2017 IIM has planned the execution of topo-bathymetric airborne LIDAR coastal surveys from 0 to 50 m of depth (in the Adriatic area and main Islands areas) for hydrographic and marine geohazard management.

e) Definition of bids to IHO CBC

NTR.

8. Oceanographic activities

a) General

The IIM provides meteo-oceanographic support to the Italian Navy through a METOC service, carried out in the Marine Geophysics and Oceanography Department. The MetOc Office manages an operation-support service and includes a Metoc and REP-REA section and a Forecast Section.

When necessary it can organize an Operational Unit for direct support to Naval

Operations.

Italy was Lead Nation for Nato IMetoc support to “Dynamic Manta 2017” and for the MetOc support to “EUNAVFORMED Operation Sophia” and to “Ermerald Move 2016”: the IIM provided oceanographic (OC) support in cooperation with COMET, the Air Force Operational Centre for Meteorology.

The IIM can provide high resolution sea-state in shallow water information, using the SWAN mathematical model, and current circulation information and products, in specific areas, using the DHI Mike3 mathematical model, for specific study or forecast purposes.

For the OC products and forecast, IIM often cooperates with national Research Centers, Universities and Institutions; in particular, IIM is involved in the Italian Oceanographic Commission (COI). COI is a group composed by several Military and Civilian entities and institutes operating within the Italian METOC context.

The IIM carries out scientific surveys and studies on oceanography, geophysics, and marine environment (e.g. the ‘MREA’ research survey in July 2016 in the Gulf of Taranto) in co-operation with other National research Centres such as National Institute of Geophysics and Volcanology (INGV), National Council of Research (CNR), Bologna University, Bari University; surveys are carried out from a coastal hydrographic vessel (Aretusa), fitted with oceanographic data collection equipment, such as CTD, XBT, Sub Bottom Profiler, Rosette system, single beam echo-sounder, multi beam echo-sounder, current meters, Side Scan Sonar, ADCP, Sea Bottom Sampler.

b) GEBCO/IBC’s activities

Italy enthusiastically supports GEBCO’s activities and has always contributed to them.

A few years ago, Italy agreed to input data from Italian ENC’s into GEBCO’s database, using Decode Enc software and sends upgrades periodically when new data is available.

It would be very useful if other MBSHC members contributed to GEBCO’s database with their own data, especially in shallow water areas.

c) Tide gauge network (five stations)

The IIM ensures the annual production and distribution of the ‘IHO’ periodical (annual) publication "Tide Tables" (I.I. 3133). IIM manages two long-time-period tide stations (Genoa (from 1880) and Brindisi (from 1979), provided with a modern radar tide-gauge and a floating ‘classic’ digital gauge (Thalimedes) connected through GSM network to the IIM data centre (SGDM – Sistema Gestione Dati Mareografici). As part of the activities for collecting new data and harmonic constants for the prediction of tides in the main Italian ports, other radar level sensors (OTT Kalesto or new type RLS) are available and are installed as needed (one is still installed in the port of Gioia Tauro (from 2012), another in the port of Augusta (from 2014) and the last in the La Maddalena island (from 2016).

d) New equipment

The IIM bought a new vibro-corer and two new gravity corers for seabed sampling (Kullenberg and SW-104 type).

e) Problems encountered

NTR.

9. Other activities

a) Participation in IHO Working Groups

IIM have increased its presence in IHO WG. Now IIM is involved in: HSSC, WENDWG, HCA, MBSHC, GEBCO, SCUFN, DQWG, NCWG, NIPWG, S-100 WG, ECNWG, IENWG, ABLOS, IRCC, CBSC, CSBWG and TWCWG.

b) Meteorological data collection

Meteorological data are collected by survey vessels during hydrographic and oceanographic surveys, and at synoptic times during transfer navigation to operational

areas.

c) Geospatial studies

A study about marine geoid is started in cooperation with Polytechnic of Milan.

d) Disaster prevention

N.A.

e) Environmental protection

N.A.

f) Astronomical observations

N.A.

g) Magnetic/Gravity surveys

Magnetic data are eventually collected by survey vessels during specific campaigns in cooperation with national scientific institutes and centres.

h) International

N.A.

i) National status of MSDI

At the following link it is possible to find the Italian *National Geoportal*:

<http://www.pcn.minambiente.it/mattm/en/>

The *National Geoportal* is the national point of access for the purposes of INSPIRE Directive (establishing an Infrastructure for spatial information in the EU) where the available spatial information are open to authorities and citizens . It is operated by the Ministry of the Environment and Land and Sea Protection.

The Italian HO (IIM) contributes to the *National Geoportal* sharing its data.

However, the IIM is developing a new project for the creation of a national Hydrographic and Cartographic Geoportal to provide more detailed information and products.

j) ENC overlapping issues

The MBSHC decided to task all ENC producer nations concerned by those UB1 overlaps (HR, GR, IT and TR) to liaise with each other under the coordination of IT and to report back to RCC on the resolution of those overlapping cases by the end of December 2015 (action MBSHC19/27).

Italy reported back to the MBSHC Charting Coordinator all the actions taken. Unfortunately, even though several proposals and informal statements of intent have been done, no tangible solutions have been undertaken.

However, Italy is fully committed in the resolution of ENCs overlapping issues and has taken the following decision, making the first move:

- To clip IT100360 cell in order to avoid overlapping with UA1F0005, UA1F0006 and TR100010.

The above decisions will be executed right after the end of the MBSHC-20 meeting.

Moreover, proposals have been sent to GR, HR and TR for the resolution of Italian overlapping issues at UB 1 and 2.

k) Risk assessment of national overlapping issues

During the last Special Region F ICCWG Meeting (27 April 2017, Monaco - side event at IHO-A1), the following action was agreed:

ICC3/06: MS to provide their own qualification of the risk level based on their own

appreciation of navigational criticality.

The table below reports the IT appreciation of navigational criticality:

<i>RENC Membership</i>	<i>ENC 1</i>	<i>ENC 2</i>	<i>Usage Band</i>	<i>IC-ENC Overall Severity of Risk</i>	<i>IT appreciation of navigational criticality</i>
IC-ENC - PRIMAR	IT200435	HR200031	2	MEDIUM	MEDIUM
IC-ENC - PRIMAR	IT200435	HR200033	2	MEDIUM	MEDIUM
IC-ENC	IT100350	TR100030	1	MEDIUM	LOW
IC-ENC	IT100340	GR1OVER1	1	LOW	LOW
IC-ENC - PRIMAR	IT100340	HR100101	1	LOW	LOW
IC-ENC	IT100350	GR1OVER1	1	LOW	LOW
IC-ENC - PRIMAR	IT100350	HR100101	1	LOW	LOW
IC-ENC	IT100350	TR100010	1	LOW	LOW
IC-ENC - PRIMAR	IT100350	UA1F0006	1	LOW	LOW
IC-ENC - PRIMAR	IT100350	UA1F0005	1	LOW	LOW
IC-ENC	IT100360	TR100010	1	LOW	LOW
IC-ENC - PRIMAR	IT100360	UA1F0005	1	LOW	LOW
IC-ENC - PRIMAR	IT100360	UA1F0006	1	LOW	LOW
IC-ENC	IT200435	GR2AF7TL	2	LOW	LOW
IC-ENC - PRIMAR	IT200435	HR200032	2	LOW	LOW
IC-ENC - PRIMAR	IT200435	HR200034	2	LOW	LOW
IC-ENC - PRIMAR	IT300032	HR3C0023	3	LOW	LOW
IC-ENC - PRIMAR	IT300032	HR3C0024	3	LOW	LOW
IC-ENC - PRIMAR	IT300038	HR3A3410	3	LOW	LOW
IC-ENC - PRIMAR	IT300039	HR3A3410	3	LOW	LOW

IC-ENC - PRIMAR	IT300039	HR3C0015	3	LOW	LOW
IC-ENC	IT300912	IT300910	3	LOW	LOW
IC-ENC	IT300912	IT300043	3	LOW	LOW
IC-ENC	IT300912	IT300043	3	LOW	LOW
IC-ENC	IT300920	GR3CFV60	3	LOW	LOW
IC-ENC - PRIMAR	IT300921	HR3C0023	3	LOW	LOW
IC-ENC - PRIMAR	IT300921	HR3C0024	3	LOW	LOW
IC-ENC - PRIMAR	IT300922	HR3C0023	3	LOW	LOW
IC-ENC - PRIMAR	IT300924	HR3A3410	3	LOW	LOW

10. Conclusions

Italy confirms that cooperation in the Mediterranean area still remains the priority for all the countries involved. MBSHC is the forum in which and through which this cooperation can be achieved; moreover, a new phase in capacity building should be considered in this area.

It is always a must, and Italy is prepared to work hard with all its Mediterranean partners, to promote cooperation through bilateral or multilateral agreements and share experience and know how.

We would like to work together in order to reach this goal and we are open to any suggestion on this important issue.