

## NATIONAL REPORT ITALY

### 1. Hydrographic Office/Service

The Italian Hydrographic Institute (IIM) has its headquarters in Genoa and 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

In the last 5 years systematic surveys exploiting modern technology have been conducted along all Italian coasts, mainly in the following areas:

- Adriatic Sea: Ancona coasts, Venice coast, Porto Nogaro coast, Brindisi coast, Tremiti islands;
- Sardinia: Gulf of Olbia and Congianus;
- Tyrrhenian Sea: Egadi Islands, Montecristo islands, Elba Island, Livorno coast, Scoglio Affrica, Pianosa Island, Marconi Gulf, La Spezia and Carrara Coasts, Pianosa Island, Seamount Palinuro;
- Jonian Sea: Crotone coasts, Strait of Sicily, Gulf of Taranto;
- Gard's Lake.

#### b) New technologies and /or equipment

- In the 2021 ITS GALATEA installed Kongsberg 2040 hull mounted;
- in the last year IIM bought two small dimensions ASV in order to be more deployable and map very shallow waters. At the moment is scheduled a new shallow water ASV's acquisition.

#### c) New ships

- The IIM is supporting the Italian Navy General Staff in the drawing up of technical-operational specifications for a new major hydro-oceanographic unit which began to be built in the last months;
- It's in plan two new coastal survey vessel for replacing of Ninfa's class;
- The IIM bought last year a new hydrographic boat for ITS Galatea in order to map port and coastal areas.

#### 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 Bands</i>	<i>Produced Cells</i>	<i>Planned Cells</i>	<i>%</i>
<b>1</b>	2	2	100
<b>2</b>	2	2	100

<b>3</b>	75	75	100
<b>4</b>	73	78	94
<b>5</b>	92	99	93
<b>6</b>	8	6	100
<b>Total</b>	252	262	96

Since the 22<sup>nd</sup> 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>
IT300923	5 <sup>^</sup> (2021)	1 : 180000	(Central) Adriatic Sea, offshore – S. Benedetto del Tronto to Cesenatico	Coastal	N.E.
IT300924	4 <sup>^</sup> (2021)	1 : 180000	(Northern) Adriatic Sea, offshore – Cervia to Po di Goro	Coastal	N.E.
IT300035	3 <sup>^</sup> (2021)	1 : 90000	Tortoreto to Porto Recanati	Coastal	N.E.
IT300037	8 <sup>^</sup> (2021)	1 : 90000	Viserba to Po delle Tolle	Coastal	N.E.
IT300917	4 <sup>^</sup> (2021)	1 : 180000	Ionian Sea, offshore - between Sicilia and Malta islands	Coastal	N.E.
IT300918	4 <sup>^</sup> (2021)	1 : 180000	(Southern) Ionian Sea, offshore - from Siracusa to Punta Stilo	Coastal	N.E.
IT300039	5 <sup>^</sup> (2021)	1 : 90000	Porto Baseleghe to Punta Sottile	Coastal	N.E.
IT300920	4 <sup>^</sup> (2021)	1 : 180000	(Northern) Ionian Sea and South Adriatic, offshore - from Gulf of Corigliano to Otranto Channel	Coastal	N.E.
IT400299	5 <sup>^</sup> (2021)	1 : 22000	Approach to Cagliari	Approach	N.E.
IT300023	6 <sup>^</sup> (2021)	1 : 90000	Milazzo Cape to Roccella Ionica	Coastal	N.E.
IT300922	2 <sup>^</sup> (2021)	1 : 180000	(Central) Adriatic Sea, offshore - Rodi Garganico to S. Benedetto del Tronto	Coastal	N.E.
IT400117	7 <sup>^</sup> (2021)	1 : 45000	Elba Island	Approach	N.E.
IT300007	6 <sup>^</sup> (2021)	1 : 90000	Cape Linaro to Anzio	Coastal	N.E.
IT400324	5 <sup>^</sup> (2021)	1 : 22000	Gulf of Arzachena and eastern Archipelago of Maddalena	Approach	N.E.
IT300909	5 <sup>^</sup> (2021)	1 : 180000	Southern Ligurian Sea (Mar Ligure Meridionale)	Coastal	N.E.
IT300046	6 <sup>^</sup> (2021)	1 : 90000	Quartu S. Elena (Cagliari) to Nebida including S. Pietro and S. Antioco Islands	Coastal	N.E.
IT300049	4 <sup>^</sup> (2021)	1 : 90000	Cape of Argentiera to Point Tramontana including Asinara and Piana Islands	Coastal	N.E.
IT500055	9 <sup>^</sup> (2021)	1 : 8000	Genova Harbour – East Side	Harbour	N.E.
IT300023	7 <sup>^</sup> (2021)	1 : 90000	Milazzo Cape to Roccella Ionica	Coastal	N.E.
IT500237	5 <sup>^</sup> (2021)	1 : 8000	Trieste Harbour	Harbour	N.E.
IT500272	4 <sup>^</sup> (2021)	1 : 8000	Catania Harbour and Roads	Harbour	N.E.
IT500077	4 <sup>^</sup> (2021)	1 : 4000	Ports of Anzio and Nettuno	Harbour	N.E.
IT50082C	3 <sup>^</sup> (2021)	1 : 4000	Marina Grande di Procida Harbour	Harbour	N.E.
IT100340	4 <sup>^</sup> (2021)	1 : 1500000	Mediterranean Sea, Western basin	Overview	N.E.
IT300014	4 <sup>^</sup> (2021)	1 : 90000	South of Cape Milazzo to Brolo including Panarea, Salina, Lipari and Vulcano Islands	Coastal	N.E.
IT300026	4 <sup>^</sup> (2021)	1 : 90000	Cirò Marina to Nova Siri Marina	Coastal	N.E.
IT400147	3 <sup>^</sup> (2021)	1 : 45000	Approach to Taranto	Approach	N.E.
IT50145A	4 <sup>^</sup> (2021)	1 : 4000	Villa San Giovanni Harbour	Harbour	N.E.
IT50214D	4 <sup>^</sup> (2021)	1 : 4000	Pesaro Harbour	Harbour	N.E.
IT400260	4 <sup>^</sup> (2021)	1 : 45000	Trapani to Marsala including Egadi Islands	Approach	N.E.
IT300010	8 <sup>^</sup> (2021)	1 : 90000	Licola to Agnone including Ischia,	Coastal	N.E.

			Procida and Capri Islands		
IT400129	7^ (2021)	1 : 22000	Ischia and Procida Channels	Approach	N.E.
IT400322	4^ (2021)	1 : 22000	Olbia and Gulf of Aranci - Tavolara and Molara Islands	Approach	N.E.
IT300910	3^ (2021)	1 : 180000	Tyrrhenian Sea, offshore – Around Corsica Island	Coastal	N.E.
IT300049	5^ (2021)	1 : 90000	Cape of Argentiera to Point Tramontana including Asinara and Piana Islands	Coastal	N.E.
IT400324	6^ (2021)	1 : 22000	Gulf of Arzachena and eastern Archipelago of Maddalena	Approach	N.E.
IT400115	5^ (2021)	1 : 22000	Approach to La Spezia	Approach	N.E.
IT300006	5^ (2021)	1 : 90000	Ansedonia to Civitavecchia including Giannutri Island	Coastal	N.E.
IT500061	4^ (2021)	1 : 4000	Marina di Carrara Harbour	Harbour	N.E.
IT500282	5^ (2021)	1 : 12000	Anchorage between La Maddalena and the northern of Sardinia	Harbour	N.E.
IT500099	4^ (2021)	1 : 8000	Gioia Tauro Harbour	Harbour	N.E.
IT500271	3^ (2021)	1 : 8000	Augusta Harbour	Harbour	N.E.
IT300021	4^ (2021)	1 : 90000	Cape Negro to Augusta	Coastal	N.E.
IT600059	5^ (2021)	1 : 4000	La Spezia Harbour	Berthing	N.E.
IT500191	4^ (2021)	1 : 8000	Brindisi Harbour	Harbour	N.E.
IT500053	5^ (2021)	1 : 8000	Harbour of Savona – Vado	Harbour	N.E.
IT400326	6^ (2021)	1 : 45000	Waters adjoining Bocche di Bonifacio	Approach	N.E.
IT50196A	4^ (2021)	1 : 4000	Molfetta Harbour	Harbour	N.E.
IT50196B	4^ (2021)	1 : 4000	Monopoli Harbour	Harbour	N.E.
IT600154	4^ (2021)	1 : 4000	Taranto Harbour - Arsenale	Berthing	N.E.
IT600281	6^ (2021)	1 : 4000	La Maddalena and S. Stefano Roads	Berthing	N.E.
IT400120	5^ (2021)	1 : 22000	Approach to Livorno	Approach	N.E.
IT400325	7^ (2021)	1 : 22000	Western Archipelago of Maddalena and S. Teresa di Gallura	Approach	N.E.
IT300042	8^ (2021)	1 : 90000	Castelsardo to Gulf of Congianus	Coastal	N.E.
IT500282	6^ (2021)	1 : 12000	Anchorage between La Maddalena and the northern of Sardinia	Harbour	N.E.
IT300031	4^ (2021)	1 : 90000	S. Spirito to Manfredonia	Coastal	N.E.
IT50214C	3^ (2021)	1 : 4000	Giulianova Harbour	Harbour	N.E.
IT300033	5^ (2021)	1 : 90000	Lake of Lesina to Pescara including S. Domino, S. Nicola and Capraia Islands	Coastal	N.E.
IT300032	5^ (2021)	1 : 90000	Point Grugno to Torre Mileto and Pianosa Island	Coastal	N.E.
IT300007	7^ (2021)	1 : 90000	Cape Linaro to Anzio	Coastal	N.E.
IT40270A	3^ (2021)	1 : 22000	Approach to Augusta and Siracusa	Approach	N.E.
IT500053	6^ (2021)	1 : 8000	Harbour of Savona – Vado	Harbour	N.E.
IT400100	5^ (2021)	1 : 45000	Mortola Cape to Riva Ligure	Approach	N.E.
IT500265	3^ (2021)	1 : 4000	Porto Empedocle Harbour	Harbour	N.E.
IT500146	3^ (2021)	1 : 4000	Crotone Harbour	Harbour	N.E.
IT300030	4^ (2021)	1 : 90000	Savellettri to Bari	Coastal	N.E.
IT500245	4^ (2021)	1 : 8000	Milazzo Harbour and Road	Harbour	N.E.
IT400106	8^ (2022)	1 : 22000	Approach to Genova	Approach	N.E.
IT300918	5^ (2022)	1 : 180000	(Southern) Ionian Sea, offshore - from Siracusa to Punta Stilo	Coastal	N.E.
IT400246	5^ (2022)	1 : 22000	Approach to Milazzo	Approach	N.E.
IT500245	5^ (2022)	1 : 8000	Milazzo Harbour and Road	Harbour	N.E.
IT500213	4^ (2022)	1 : 4000	San Benedetto del Tronto Harbour	Harbour	N.E.
IT50074B	3^ (2022)	1 : 4000	Giglio Porto Port	Harbour	N.E.
IT300003	8^ (2022)	1 : 90000	Pieve L. to San Rossore	Coastal	N.E.
IT300014	5^ (2022)	1 : 90000	South of Cape Milazzo to Brolo including Panarea, Salina, Lipari and Vulcano Islands	Coastal	N.E.

IT500311	5^ (2022)	1 : 8000	Cagliari Harbour	Harbour	N.E.
IT50208A	1^ (2022)	1 : 4000	Pesaro Harbour	Harbour	N.E.
IT50208B	1^ (2022)	1 : 4000	Porto Garibaldi Port	Harbour	N.E.
IT500199	4^ (2022)	1 : 8000	Manfredonia Port	Harbour	N.E.
IT500218	5^ (2022)	1 : 8000	Ravenna Harbour	Harbour	N.E.
IT500058	3^ (2022)	1 : 8000	Marconi Gulf (Gulf of Tigullio)	Harbour	N.E.
IT500311	6^ (2022)	1 : 8000	Cagliari Harbour	Harbour	N.E.
IT300043	6^ (2022)	1 : 90000	Capo Figari to Capo di Monte Santu	Coastal	N.E.
IT500189	4^ (2022)	1 : 4000	Otranto Harbour	Harbour	N.E.
IT400299	6^ (2022)	1 : 22000	Approach to Cagliari	Approach	N.E.
IT40118C	4^ (2022)	1 : 22000	Pianosa Island	Approach	N.E.
IT500213	5^ (2022)	1 : 4000	San Benedetto del Tronto Harbour	Harbour	N.E.
IT400100	6^ (2022)	1 : 45000	Mortola Cape to Riva Ligure	Approach	N.E.
IT500318	3^ (2022)	1 : 8000	Olbia Port - Sardinia	Harbour	N.E.
IT300036	9^ (2022)	1 : 90000	Numana to Rimini	Coastal	N.E.
IT500255	6^ (2022)	1 : 8000	Port of Palermo	Harbour	N.E.
IT50196A	5^ (2022)	1 : 4000	Molfetta Harbour	Harbour	N.E.
IT500053	7^ (2022)	1 : 8000	Harbour of Savona – Vado	Harbour	N.E.
IT40204A	3^ (2022)	1 : 22000	Tremi Isles	Approach	N.E.
IT100340	5^ (2022)	1 : 1500000	Mediterranean Sea, Western basin	Overview	N.E.
IT300037	9^ (2022)	1 : 90000	Viserba to Po delle Tolle	Coastal	N.E.
IT500149	3^ (2022)	1 : 8000	Gallipoli Harbour	Harbour	N.E.
IT50145A	5^ (2022)	1 : 4000	Villa San Giovanni Harbour	Harbour	N.E.
IT500209	6^ (2022)	1 : 4000	Ancona Harbour	Harbour	N.E.
IT500191	5^ (2022)	1 : 8000	Brindisi Harbour	Harbour	N.E.
IT400246	6^ (2022)	1 : 22000	Approach to Milazzo	Approach	N.E.
IT40289A	4^ (2022)	1 : 45000	Gulf of Asinara	Approach	N.E.
IT400107	6^ (2022)	1 : 22000	From Nervi to Sestri Levante	Approach	N.E.
IT500058	4^ (2022)	1 : 8000	Marconi Gulf (Gulf of Tigullio)	Harbour	N.E.
IT500291	4^ (2022)	1 : 8000	Oristano Harbour	Harbour	N.E.
IT300017	4^ (2022)	1 : 90000	Castellammare del Golfo to Marsala including Egadi Islands	Coastal	N.E.
IT500060	7^ (2022)	1 : 8000	Roads of La Spezia	Harbour	N.E.
IT600153	3^ (2022)	1 : 4000	Taranto Harbour: Stazione Navale	Berthing	N.E.
IT500148	6^ (2022)	1 : 12000	Taranto Harbour	Harbour	N.E.
IT500212	5^ (2023)	1 : 4000	Ortona Harbour	Harbour	N.E.
IT400246	7^ (2023)	1 : 22000	Approach to Milazzo	Approach	N.E.
IT400274	4^ (2023)	1 : 22000	Approach to Catania	Approach	N.E.
IT500076	3^ (2023)	1 : 12000	Civitavecchia Harbour	Harbour	N.E.
IT50075D	3^ (2023)	1 : 4000	Terracina Harbour	Harbour	N.E.
IT400325	7^ (2023)	1 : 22000	Western Archipelago of Maddalena and S. Teresa di Gallura	Approach	N.E.
IT50074B	4^ (2023)	1 : 4000	Giglio Porto Port	Harbour	N.E.
IT500220	4^ (2023)	1 : 8000	Port of Chioggia	Harbour	N.E.
IT400322	5^ (2023)	1 : 22000	Olbia and Gulf of Aranci - Tavolara and Molara Islands	Approach	N.E.
IT400323	4^ (2023)	1 : 22000	Congianus Gulf	Approach	N.E.
IT500295	4^ (2023)	1 : 4000	Portovesme and Portoscuso Harbours	Harbour	N.E.
IT400293	5^ (2023)	1 : 45000	Gulf of Oristano	Approach	N.E.
IT40204A	4^ (2023)	1 : 22000	Tremi Isles	Approach	N.E.
IT50204B	3^ (2023)	1 : 4000	Tremi Isles Anchorages	Harbour	N.E.
IT50204C	3^ (2023)	1 : 4000	Pianosa Isle	Harbour	N.E.
IT300007	8^ (2023)	1 : 90000	Cape Linaro to Anzio	Coastal	N.E.
IT400130	8^ (2023)	1 : 22000	Approach to Napoli	Approach	N.E.
IT500071	7^ (2023)	1 : 8000	Piombino Roads and Harbour	Harbour	N.E.
IT500078	4^ (2023)	1 : 8000	Gaeta and Formia Harbours	Harbour	N.E.
IT400294	5^ (2023)	1 : 22000	San Pietro Channel	Approach	N.E.
IT400274	5^ (2023)	1 : 22000	Approach to Catania	Approach	N.E.
IT500191	6^ (2023)	1 : 8000	Brindisi Harbour	Harbour	N.E.
IT600281	7^ (2023)	1 : 4000	La Maddalena and S. Stefano Roads	Berthing	N.E.

IT500282	7^ (2023)	1 : 12000	Anchorage between La Maddalena and the northern of Sardinia	Harbour	N.E.
IT400119	3^ (2023)	1 : 22000	Giglio Island	Approach	N.E.
IT400322	6^ (2023)	1 : 22000	Olbia and Gulf of Aranci - Tavolara and Molara Islands	Approach	N.E.
IT400123	5^ (2023)	1 : 22000	Approach to Civitavecchia	Approach	N.E.
IT300047	4^ (2023)	1 : 90000	Porto di Masua to Sturraggia Cape including Mal di Ventre Islet	Coastal	N.E.
IT500071	8^ (2023)	1 : 8000	Piombino Roads and Harbour	Harbour	N.E.
IT400325	8^ (2023)	1 : 22000	Western Archipelago of Maddalena and S. Teresa di Gallura	Approach	N.E.
IT400324	7^ (2023)	1 : 22000	Gulf of Arzachena and eastern Archipelago of Maddalena	Approach	N.E.
IT200434	6^ (2023)	1 : 700000	Tirreno Sea and Strait of Sicilia	General	N.E.
IT40204A	5^ (2023)	1 : 22000	Tremiti Isles	Approach	N.E.
IT50204B	4^ (2023)	1 : 4000	Tremiti Isles Anchorages	Harbour	N.E.
IT600154	5^ (2023)	1 : 4000	Taranto Harbour - Arsenale	Berthing	N.E.
IT400138	6^ (2023)	1 : 22000	Strait of Messina	Approach	N.E.
IT50074C	3^ (2023)	1 : 4000	Porto S. Stefano Port	Harbour	N.E.
IT50074A	3^ (2023)	1 : 4000	Porto Ercole and Cala Galera Ports	Harbour	N.E.
IT400115	6^ (2023)	1 : 22000	Approach to La Spezia	Approach	N.E.
IT400192	5^ (2023)	1 : 45000	Approach to Brindisi	Approach	N.E.
IT300046	7^ (2024)	1 : 90000	Quartu S. Elena (Cagliari) to Nebida including S. Pietro and S. Antioco Islands	Coastal	N.E.
IT400192	5^ (2024)	1 : 45000	Approach to Brindisi	Approach	N.E.
IT200434	7^ (2024)	1 : 700000	Tirreno Sea and Strait of Sicilia	General	N.E.
IT300019	5^ (2024)	1 : 90000	Torre Salsa to Licata	Coastal	N.E.
IT300037	10^ (2024)	1 : 90000	Viserba to Po delle Tolle	Coastal	N.E.
IT400323	5^ (2024)	1 : 22000	Congianus Gulf	Approach	N.E.

– **In progress:**

<i>Name</i>	<i>Scale</i>	<i>Title</i>	<i>Nav Purpose</i>	<i>N.E./N.C.</i>
IT50083A	1:8.000	Port of Pozzuoli	Harbour	N.E.
IT50083B	1:8.000	Port of Bagnoli	Harbour	N.E.
IT50083C	1:8.000	Port of Miseno	Harbour	N.E.
IT50083D	1:8.000	Port of Baia	Harbour	N.E.
IT500318	1:8.000	Olbia Port	Harbour	N.E.
IT500071	1:8.000	Piombino Roads and Harbour	Harbour	N.E.
IT500063	1:4.000	Viareggio Harbour	Harbour	N.E.
IT500316	1:4.000	Arbatax Harbour	Harbour	N.E.
IT400325	1:22.000	Western Archipelago of Maddalena and S. Teresa di Gallura	Approach	N.E.
IT500148	1:12.000	Taranto Harbour	Harbour	N.E.
IT500272	1:8.000	Ctania Harbour and Roads	Harbour	N.E.
IT300029	1:90.000	Torre Specchia Ruggeri to point Torre Canne	Coastal	N.E.
IT300030	1:90.000	Sevellettri to Bari	Coastal	N.E.
IT400881	1:50.000	Capo Russell to Campbell Glacier Tongue	Approach	N.E.
IT400138	1:22.000	Strait of Messina	Approach	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>
<b>Small</b>	3	3	100
<b>Medium</b>	16	16	100
<b>Large</b>	30	32	94
<b>Total</b>	49	51	96

Since the 22<sup>nd</sup> conference the following INT Charts have been produced:

– **INT Charts published:**

<i>National n.</i>	<i>INT n.</i>	<i>Title</i>	<i>N.E./N.C.</i>
431	303	Mare di Alboran e Mar Balear	N.E. (2021)
432	304	Dalle Isole Baleari alla Corsica e alla Sardegna	N.E. (2021)
437	307	Dallo Stretto di Sicilia al Mare Egeo	N.E. (2021)
917	3319	Da Capo Rossello ad Augusta e Isole Maltesi	N.E. (2021)
918	3320	Da Augusta a Punta Stilo e stretto di Messina	N.E. (2021)
54	3361	Porto di Genova - Foglio Ovest	N.E. (2021)
55	3362	Porto di Genova - Foglio Est	N.E. (2021)
60	3365	Rada della Spezia	N.E. (2022)
106	3360	Litorale di Genova	N.E. (2022)
115	3364	Litorale della Spezia	N.E. (2023)
326	3350	Bocche di Bonifacio	N.E. (2024)
138	3352	Stretto di Messina	N.E. (2023)
246	3388	Litorale di Milazzo	N.E. (2023)
270	3394	Litorale di Augusta e Siracusa	N.E. (2021)
274	3393	Litorale di Catania	N.E. (2023)
99	3395	Porto di Gioia Tauro	N.E. (2021)
192	3460	Litorale di Brindisi	N.E. (2023)
218	3467	Porto di Ravenna	N.E. (2022)
239	3468	Litorale di Trieste	N.E. (2021)
299	3376	Litorale di Cagliari	N.E. (2021)
115	3364	Litorale della Spezia	N.E. (2023)
326	3350	Bocche di Bonifacio - Golfo di Arzachena	N.E. (2024)

It is worth mentioning that Italy and Tunisia are working on the co-production of the INT Chart 3212 (Da Ras El-Mir e Cap Africa - Pantelleria e Isole Pelagie – at scale 1:250.000). In the next 3 years, it is expected the co-production with Tunisia of the INT chart 3212.

– **INT Charts in progress:**

<i>INT n.</i>	<i>National n.</i>	<i>Title</i>	<i>N.E./N.C.</i>
3387	96	Rada di Salerno	N.E.
3362	55	Genova-Goglio EST	N.E.
3466	210	Litorale di Ancona	N.C
9005	881	Da Capo Russell a Campbell Glacier Tongue	N.E.
3352	138	Stretto di Messina	N.E

e) **National paper charts**

Since the 22<sup>nd</sup> conference the following National Charts have been produced:

– **National Charts published:**

<i>National n.</i>	<i>Title</i>	<i>N.E./N.C.</i>
245	Rada e Porto di Milazzo	N.E. (2021)
59	Porto della Spezia	N.C. (2021)

118	Isole di Giannutri Montecristo e Pianosa	N.E. (2022)
237	Porto di Trieste	N.E. (2022)
220	Porto di Chioggia	N.E. (2023)
22	Da Capo Santa Croce a Messina e Capo dell'Armi	N.E. (2021)
23	Da Capo Milazzo a Roccella Ionica	N.E. (2021)
7	Da Capo Linaro ad Anzio	N.E. (2021)
49	Da Capo Caccia a Castelsardo e Isola Asinara	N.E. (2021)
325	Arcipelago di La Maddalena – foglio Ovest	N.E. (2021)
19	Da Sciacca a Licata	N.E. (2021)
21	Da C.o Passero a C.o S.Croce	N.E. (2021)
311	Porto di Cagliari	N.E. (2022)
122	Dalla Foce dell'Ombrone al Promontorio Argentario	N.E. (2021)
322	Golfi di Olbia e degli Aranci – Isole Tavolara e Molara	N.E. (2021)
32	Da Manfredonia al Lago di Lesina-Isole Tremiti e Pianosa	N.E. (2021)
272	Rada e Porto di Catania	N.E. (2021)
8	Da Anzio a Capo Circeo e Isole Pontine	N.E. (2021)
38	Dal Po di Goro a Punta Taglimento	N.E. (2021)
40	Da Cap Corse ad Alistro e all'Isola d'Elba	N.E. (2021)
271	Rada e Porto di Augusta	N.E. (2021)
37	Da Pesaro al Po di Goro	N.E. (2021)
323	Golfo di Congianus e Passo delle Bisce	N.E. (2024)
42	Da Castelsardo a Olbia e Bocche di Bonifacio	N.E. (2021)
154	Porto di Taranto-Arsenale	N.E. (2021)
196	Porti di Molfetta e Monopoli	N.C. (2022)
282	Ancoraggi tra la Maddalena e la Costa Nord della Sardegna	N.E. (2021)
960	Dalle Secche di Kerkenah all'sola di Linosa	N.E. (2021)
1315	Limiti ed aree di interesse operativo	N.E. (2023)
208	Porti di Pesaro e Porto Garibaldi	N.C. (2022)
946	Da Cap Africa a Ras Tina e Isole Pelagie	N.E. (2022)
199	Porto di Manfredonia	N.E. (2022)
189	Porto di Otranto	N.E. (2022)
213	Porto di San Benedetto del Tronto	N.E. (2022)
237	Porto di Trieste	N.E. (2022)
219	Litorale di Ravenna	N.E. (2022)
145	Porti di Reggio di Calabria e Villa S. Giovanni	N.E. (2022)
209	Porto di Ancona	N.E. (2022)
291	Porto di Oristano	N.E. (2022)
255	Rada e Porto di Palermo	N.E. (2022)
149	Porto di Gallipoli	N.E. (2022)
212	Porto di Ortona	N.E. (2022)
153	Porto di Taranto Stazione Navale	N.E. (2023)
295	Porti di Portovesme e Portoscuro	N.E. (2023)
204	Isole Tremiti e Pianosa	N.E. (2023)
78	Porti di Gaeta e Formia	N.E. (2023)
191	Porto di Brindisi	N.E. (2023)
324	Arcipelago di La Maddalena (foglio est)	N.E. (2023)
138	Stretto di Messina	N.E. (2023)
74	Porti dell'Argentario e Isola del Giglio	N.E. (2023)
82	Porti delle isole di Ponza - Ischia - Procida	N.E. (2024)

– In progress:

<i>National n.</i>	<i>Title</i>
83	Porti minori della Campania-Da Miseno a Bagnoli
318	Porto di Olbia
71	Rada e Porto di Piombino
63	Porto di Viareggio
316	Porto di Arbatax
325	Arcipelago di La Maddalena - Foglio Ovest

148	Porto di Taranto
272	Rada e Porto di Catania
29	Da Torre dell'Orso a Brindisi
30	Da Brindisi a Bari

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

Since the 22<sup>nd</sup> conference the following pleasure craft paper charts have been produced:

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

They have been retired since January 1<sup>st</sup> 2023.

**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. 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 22<sup>nd</sup> conference the following publications have been produced:

**a) New publications**

*Miscellaneous*

<i>Number</i>	<i>Title</i>	<i>Edition</i>
I.I. 3132	EFFEMERIDI NAUTICHE	2021
I.I. 3132	EFFEMERIDI NAUTICHE	2022
I.I. 3132	EFFEMERIDI NAUTICHE	2023
I.I. 3132	EFFEMERIDI NAUTICHE	2024
I.I. 3133	TAVOLE DI MAREA	2021
I.I. 3133	TAVOLE DI MAREA	2022
I.I. 3133	TAVOLE DI MAREA	2023
I.I. 3133	TAVOLE DI MAREA	2024
I.I. 2024	L'AGENDA NAUTICA	2021
I.I. 2024	L'AGENDA NAUTICA	2022
I.I. 2024	L'AGENDA NAUTICA	2023
I.I. 2024	L'AGENDA NAUTICA	2024
I.I. 3176	DISCIPLINARE TECNICO PER LA STANDARDIZZAZIONE DEI RILEIVI IDROGRAFICI	2021
I.I. 3023	NORME PER LA TENUTA E L'AGGIORNAMENTO DELLE CARTE E DELLE PUBBLICAZIONI NAUTICHE EDITE DALL'IIM	2021
I.I. 3176	DISCIPLINARE TECNICO PER LA STANDARDIZZAZIONE DEI RILEIVI IDROGRAFICI	2023
I.I. 3023	NORME PER LA TENUTA E L'AGGIORNAMENTO DELLE CARTE E DELLE PUBBLICAZIONI NAUTICHE EDITE DALL'IIM	2023
I.I. 3187	BASIC OF HYDROGRAPHY	2023



I.I. 3173	NORME PER LE COMUNICAZIONI DELLE INFORMAZIONI NECESSARIE ALL'AGGIORNAMENTO E ALLA PUBBLICAZIONE DELLA DOCUMENTAZIONE UFFICIALE DELLO STATO E PER L'AGGIORNAMENTO DELLE RELATIVE BANCHE DATI.	2023
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### *Sailing Directions*

<i>Number</i>	<i>Title</i>	<i>Edition</i>
I.I. 3207	PORTOLANO P7	2021
I.I. 3206	PORTOLANO P6	2021
I.I. 3203	PORTOLANO P3	2023

### *Catalogues*

<i>Number</i>	<i>Title</i>	<i>Edition</i>
I.I. 3001	CATALOGO GENERALE DELLE CARTE E DELLE PUBBLICAZIONI NAUTICHE	2021
I.I. 3001	CATALOGO GENERALE DELLE CARTE E DELLE PUBBLICAZIONI NAUTICHE	2022
I.I. 3001	CATALOGO GENERALE DELLE CARTE E DELLE PUBBLICAZIONI NAUTICHE	2023

#### **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. Since 2023 the “I.I. 3001 Catalogo generale delle carte e delle pubblicazioni nautiche” (Catalogue publication) is also available in digital format, updated fortnightly at every NtM booklet is issued. 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 2023)

<i>Nation/Area</i>	<i>A1</i>	<i>A2</i>	<i>B1</i>	<i>B2</i>	<i>C1</i>	<i>C2</i>
ITALY	74.38%	55.544%	22.48%	44.09%	3.13%	0.36%

The new project described in next paragraph d) will cover also areas mapped in the past with traditional or old technology.

## 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:
  - Nautical charts and Publication production;
  - MSI infrastructure establishment;
  - Hydrographic surveys and data validation;
  - Aids to Navigation establishment;
  - Hydrographic launch, instruments and material provision.

Since 2021 IIM have been hosting OJT courses to Albanian personnel.

- Lybia: from 1999 on the base of a bilateral agreement some activities were executed as follows:
  - Specialistic education and training;
  - Theoretical-practical hydrographic and cartographic activities;
  - Hydrographic surveys in Lybia performed by Italian Hydrographic vessels;
  - Support to Hydrographic Service rules and standards production;
  - 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. It restarted with some basic courses in Lybia done by IIM hydrographer every year. Also from june until july 2021 ITS Magnaghi carried out port and coastal surveys of Tripoli. At the end of 2023 an expert meeting was held in Genova.

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

The program is almost all fulfilled, and also it have been started a coproduction program on the Lebanon portfolio of ENC and Paper Chart. The collabotio

continued on a regular basis with OJT training in different fields both in Lebanon and Italy.

**b) Training received, needed, offered**

Presently, IIM offers training courses for hydrographers:

- Category A course: recognized by the FIG/IHO/ICA International Board in 2021 “POST-GRADUATED COURSE IN MARINE GEOMATICS FOR HYDROGRAPHY” open to military and civilian personnel;
- Category B course: recognized by the FIG/IHO/ICA International Board in 2021 open to military and civilian personnel;
- Cartographic trainings organized on specific modules and on demand.

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 every year in Bizerte/Tunisia and Genoa/Italy to finalize the coproduction of charts.

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 activity agreed case-by-case. The last bilateral meeting was held in Tel Aviv on November 2022.

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. In Hydrographers from both countries met in Rome in June 2013 but no particular activity was still performed. As mentioned before, since 2021 we're offering OJT in Libya. Also from June until July 2021 ITS Magnaghi carried out port and coastal surveys of Tripoli. In the last expert meeting that was held in Genoa in November 2023, a new road map was discussed.

Lebanon:

Two annual meetings are normally held Italy and Lebanon Beirut since 2019. Thanks to the Capacity building project, Lebanon joined the IHO on the 7th of December 2020 and subsequently the MBSHC on the 26th of February 2021. Italian contribution till 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 on August September 2018, November December 2019 and June 2022.

iii. Visit to the Italian Hydrographic Institute for hydrographic/cartographic purposes:  
2019

Hydrographic experts from Tunisia, Pakistan and Lebanon

2020

Hydrographic experts from Greece, Croatia and Lebanon.

2021

Hydrographic expert from Qatar, Lebanon, Ukraine, Pakistan, Morocco and Albania.

2022

Hydrographic experts from Algeria, Lebanon, Albania. An 5+5 meeting was hosted at the end of the year, with participants from Spain, Lebanon, Libya.

2023

Hydrographic experts from Tunisia, Nigeria, Libya, Morocco and Lebanon

2024

Hydrographic experts from Algeria.

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

The IIM supports the Italian Institute for Environmental Protection and Research (ISPRA), which acts under the vigilance and policy guidance of the Italian Ministry for the Environment and the Protection of Land and Sea, in a really ambitious project which will cover all Italian coasts inshore and offshore by LiDAR/MBEs in order to map oceanic Posidonia O. and Cymodocea n..

**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 is Lead Nation for NATO IMetoc support to the Allied Response Force for the cycle 2023-2024 and for the MetOc support to “EUNAVFORMED Operation Irini”. 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, for specific study or forecast purposes.

For the OC products and forecast, IIM often cooperates with national Research Centers, Universities and Institutions and it is involved in the Italian Oceanographic Commission (COI) which 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 in co-operation with other national research centres such as National Institute of Geophysics and Volcanology (INGV), National Council of Research (CNR), Italian National Agency for New Technologies, Energy and Sustainable Economic Development (ENEA) and Universities. Surveys are carried out by hydro-oceanographic naval units of the Italian Navy, fitted with oceanographic data collection equipment, such as CTD, XBT, Sub Bottom Profiler, Rosette system, single beam echo-sounder, multi beam echo-sounder, current metres, 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.

Bathymetry of several arctic areas surveyed during the HIGH-NORTH program was also shared.

**c) Oceanographic and geophysics activities**

The Italian Navy - acting as national marine focal point for Arctic research - launched in 2017, the Pluriannual Joint Research Program in the Arctic, named HIGH NORTH. A new three years activity is in progress with an enhanced overview having a look to the 3D mapping from satellite to seabed. The HIGH NORTH Program has three fundamental pillars represented by the 3 E: Exploration, Environment and Education, supported by the 3 C: Collaboration, Coordination and Cooperation.

The SWIM-LIG Campaign (Summer and Winter Intensive Monitoring of the Ligurian Sea), focused in the Ligurian Sea, started in 2017 and it is performed twice a year, in Winter and in Summer, to monitor the evolution of temperature, salinity and other oceanographic physical parameters

The Implementation of a mooring (LCM - Levante Canyon Mooring), with several oceanographic instruments near the ligurian eastern was performed in collaboration with CNR.

**d) Tide gauge network (five stations)**

IIM manages a network of five tide gauge stations composed by two long-time-period tide stations: Genoa since 1880 and Brindisi since 1979, provided with a radar sensor and a floating tide gauge, and three tide gauges located inside the harbours of Gioia Tauro in Calabria (since 2012), Augusta, in southern Sicily (since 2014) and La Maddalena in an island north east of Sardinia (since 2016) equipped with radar sensors. They are all connected through a GSM network to the IIM data centre ("SGDM – Sistema Gestione Dati Mareografici").

The validation and processing of these data includes the calculation of harmonic constants and of annual mean sea levels, along with the monitoring of extreme events (storms surges and meteotsunamis). As a result, IIM ensures the production and distribution of the 'IHO' annual publication of tide tables namely "Tavole di Marea - I.I. 3133".

**e) Satellite Derived Bathymetry (SDB) and Photogrammetry**

IIM provided bathymetric and coastal morphological data derived from processed satellite imagery and LIDAR satellite data to Naval Units during the "Mare Aperto" exercise.

Furthermore, IIM is a member of the IHO Satellite-Derived Bathymetry Project Team (SBD-PT) with the purpose to foster the understanding on SDB, its usage and work towards best practice guidelines.

In the field of photogrammetry, a specialized team from IIM conducted surveys using aerial

drones equipped with photogrammetric camera to generate a three-dimensional model of the terrain with topographic precision (Digital Elevation Model - DEM).

**f) New equipment**

IIM bought the following instruments: a CTD probe Seabird 916, a Teledyne “rapidCAST” system, two aerial drones and a Sub Bottom Profiler

**g) Training**

A course for Compass Compensators was offered in 2020, 2022 and 2023

**h) 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.

At the end of February, IIM hosted INMRI researchers and their instruments to measure with high accuracy the value of gravitational acceleration “g”. This important measurement is part of a network of data distributed in the northern part of Italy.

**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 is 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 retire IT100360 cell in order to avoid overlapping with UA1F0005, UA1F0006 and TR100010.

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**

The table below reports the IT appreciation of navigational criticality:

<b>RENC Membership</b>	<b>ENC 1</b>	<b>ENC 2</b>	<b>Usage Band</b>	<b>Impact Assessment</b>	<b>Action requested</b>
IC-ENC	IT100350	TR100030	1	MEDIUM	HOs to discuss and resolve overlaps
IC-ENC - PRIMAR	IT100340	HR100101	1	LOW	HOs to discuss and resolve overlaps
IC-ENC - PRIMAR	IT100350	HR100101	1	LOW	HOs to discuss and resolve overlaps
IC-ENC - PRIMAR	IT200435	HR200351	2	LOW	Agree scheming between producers
IC-ENC - PRIMAR	IT200435	HR200352	2	LOW	Agree scheming between producers
IC-ENC - PRIMAR	IT200435	HR200353	2	LOW	Agree scheming between producers
IC-ENC - PRIMAR	IT200435	HR200354	2	LOW	Agree scheming between producers
IC-ENC - PRIMAR	IT300032	HR3C0023	3	LOW	HOs to discuss and resolve overlaps
IC-ENC	IT300036	IT300923	3	LOW	Sliver to be removed from IT300923
IC-ENC - PRIMAR	IT300039	HR3C0015	3	LOW	HOs to discuss and resolve overlaps
IC-ENC - PRIMAR	IT300921	HR3C0023	3	LOW	HOs to discuss and resolve overlaps
IC-ENC - PRIMAR	IT300922	HR3C0023	3	LOW	
IC-ENC	TR100010	IT100350	1	LOW	HOs to discuss and resolve overlaps

## **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. In addition, a new phase in capacity building should be considered in this area.

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.