

NATIONAL REPORT – ITALY

1. Hydrographic Office/Service

The Italian Hydrographic Institute, IIM, has his headquarter in Genoa.

2. Surveys

a) Coverage of new surveys.

Most of the activity has been devoted to maintain surveys of the Italian Seas, in particular along the south coast of Italy (Calabrian coast of the Ionian Sea), in the North Adriatic Sea and along the coasts of Otranto Channel.

Multibeam echosounders have been mounted on the hydrographic boats of the three ships and the boat as well.

During winters 2008 and 2009 have no been conducted surveys in Antarctic Sea because of the cuts of national budget of the research project finance.

b) New technologies and /or equipment

During spring 2008 have been carried out the following equipments testing:

- Optech's ILRIS-3D(MC) laser scanner is a complete, fully portable, laser-based imaging and digitizing system. It enables the collection of precise dynamic motion-compensated 3D data sets from a moving platform.
- SWATH plus H - Wide Swath Bathymetry & Sidescan is a pole or hull-mounted swath bathymetry survey sonar that can achieve swath widths of over 12 times the water depth. SWATHplus H works on a 468 kHz frequency.
- Applanix POS MV 320 is a tightly coupled Inertial/GPS system that employs high precision ring laser gyros. The system includes a highly accurate state-of-the-art inertial measurement unit (IMU) originally designed for the aerospace industry and is now available for marine hydrographic service

Using one of the hydrographic boat of Nave Magnaghi has been conducted an experimental survey, in Portofino area, using all three instruments in order to collect land and sea bottom data.

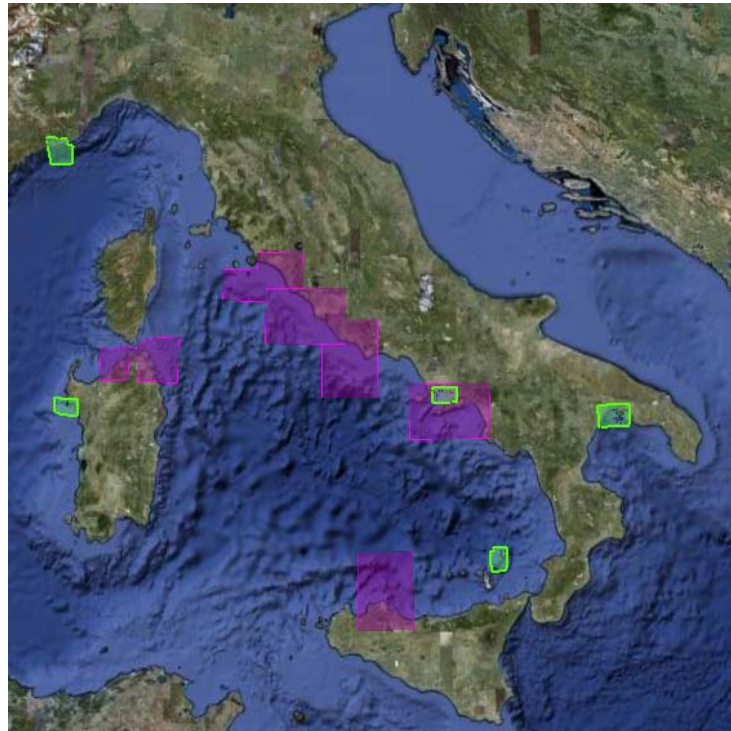
c) New ships

N.A.

d) Problems encountered

Survey activities have been strongly conditioned by Nave Magnaghi periodic maintenance works and some equipment failures happened to hydrographic boats and Nave Aretusa.

Normal instruments and equipments turnover and update are penalized from national financial restrictions.



New ENC cells (purposes 3 and 4)

3. New charts & updates

a) ENCs

Since the 15th conference have been produced the following ENC cells:

2007

Name	Ed.	Scale	Title	Nav Purpose
IT300006	2	1:90.000	Ansedonia to Civitavecchia including Giannutri Island	Coastal
IT300016	2	1:90.000	Termini Imerese to Alcamo Marina including Ustica Island	Coastal
IT300042	3	1:90.000	Castelsardo to Tavolara Island	Coastal
IT400249	1	1:22.000	Panarea and Stromboli Islands	Approach
IT500148	2	1:12.000	Taranto harbour	Harbour
IT500221	2	1:4.000	Port of Chioggia	Harbour
IT500226	2	1:8.000	Venezia - North of Marghera	Harbour
IT500255	2	1:8.000	Port of Palermo	Harbour
IT500316	1	1:4.000	Arbatax Harbour	Harbour

2008

IT300007	2	1:90.000	Cape Linaro to Anzio	Coastal
IT300008	2	1:90.000	Torre Astura to Circeo Cape and Pontine Islands	Coastal
IT300010	2	1:90.000	Ischia to Punta Licosa	Coastal
IT400100	1	1:45.000	Mortola Cape to Riva Ligure	Approach
IT400130	2	1:22.000	Approach to Napoli	Approach
IT400147	1	1:45.000	Approach to Taranto	Approach
IT500058	1	1:8.000	Golfo Marconi (Golfo Tigullio)	Harbour
IT500071	1	1:8.000	Rada e Porto di Piombino	Harbour
IT500079	1	1:8.000	Gaeta Harbour	Harbour
IT500084	3	1:8.000	Napoli Harbour	Harbour
IT500094	1	1:4.000	Torre Annunziata Harbour	Harbour
IT500095	1	1:4.000	Castellammare di Stabia Harbour	Harbour
IT500134	1	1:4.000	Vibo Valentia Marina Harbour	Harbour
IT500149	1	1:8.000	Gallipoli Harbour	Harbour
IT500191	1	1:8.000	Brindisi Harbour	Harbour
IT50196B	2	1:4.000	Monopoli Harbour	Harbour
IT500211	1	1:4.000	Pescara Harbour	Harbour
IT500212	1	1:4.000	Ortona Harbour	Harbour
IT50214E	1	1:4.000	Senigallia Harbour	Harbour
IT500265	1	1:4.000	Porto Empedocle Harbour	Harbour
IT500282	1	1:12.000	Anchorage between La Maddalena and the northern side of Sardinia	Harbour
IT500290	1	1:4.000	Alghero Harbour	Harbour
IT500318	1	1:8.000	Olbia Harbour	Harbour

2009

IT300884	1	1:250.000	TERRA NOVA BAY	Coastal
IT400881	1	1:90.000	Cape Russell to Campbell Glacier Tongue	Approach
IT400292	1	1:22.000	Approach to Alghero and Porto Conte	Approach

Reissues

IT300002	1	1:90.000	Imperia to Genova	Coastal
IT300011	1	1:90.000	Acciaroli to Diamante	Coastal
IT300012	1	1:90.000	Cape Tirone to Briatico	Coastal
IT300013	1	1:90.000	Cape Cozzo to Gioia Tauro including Stromboli island	Coastal
IT300026	1	1:90.000	Cirò Marina to Nora Siri Marina	Coastal
IT300028	1	1:90.000	Santa Caterina to S. Foca di Melendugno	Coastal
IT300029	1	1:90.000	Torre Spechia Ruggeri to Point Torre Canne	Coastal
IT300031	1	1:90.000	S. Spirito to Manfredonia	Coastal
IT300033	1	1:90.000	Lake of Lesina to Pescara including S. Domino, S.Nicola and Capara Islands	Coastal
IT300035	1	1:90.000	Tortoreto to Porto Recanati	Coastal
IT300037	4	1:90.000	Pesaro to Po delle Tolle	Coastal
IT300038	3	1:90.000	Sacca dei Canarini to Porto Falconera	Coastal
IT300046	1	1:90.000	Quartu S.Elena (Cagliari) to Nebida including S.Pietro and S.Antioco Isle	Coastal
IT400104	1	1:22.000	Approach to Savona	Approach
IT400115	1	1:22.000	Approach to La Spezia	Approach
IT400117	1	1:22.000	Elba Island	Approach
IT400129	1	1:22.000	Channels of Ischia and Procida	Approach
IT400130	2	1:22.000	Approach to Napoli	Approach
IT400222	2	1:45.000	Approach to Venezia	Approach
IT400322	1	1:22.000	Olbia and Aranci Gulfs - Tavolara and Molara Islands	Approach

b) ENC Distribution method

Italian cells are distributed through both RENCs (Primar and IC-ENC) and Jeppesen Official ENC Service.

c) RNCs

N.A.

d) INT charts**New Charts:**

Chart	Title	Scale	Edition
138 INT 3352	Stretto di Messina	1:30.000	Jul 2009
908 INT 3118	Da Fos-sur-Mer a Capo Mele	1:250.000	May 2008
2093 INT 3195	Da Cap Couronne a Cap Croisette Golfe de Marseille	1:25.000	May 2008
208 INT 3198	Rada di Toulon	1:10.000	Jun 2008
923 INT 3408	Da Porto San Giorgio a Porto Corsini e Zara	1:250.000	Jun 2008
884 INT 9004	Baia di Terra Nova	1:250.000	Nov 2007

New Editions:

1111 INT 1	Simboli Abbreviazioni Termini in uso nelle carte nautiche		Apr 2009
84 INT 3386	Porto di Napoli	1:10.000	May 2008

Under Production to be published within 2009:

62 INT 3369	Porto di Livorno	1:10.000	
76 INT 3370	Porto di Civitavecchia	1:7.500	
96 INT 3387	Rada di Salerno	1:10.000	
138 INT 3352 ¹	<i>Stretto di Messina</i>	1:30.000	
274 INT 3393	Litorale di Catania	1:30.000	
53 INT 3357	Porto di Savona-Vado	1:10.000	
104 INT 3356	Litorale di Savona	1:30.000	

e) National paper charts**New Charts**

62	Porto di Livorno	1:10.000	Nov 2008
297	Porto di Carloforte	1:5.000	Oct 2008
121	Litorale da Quercianella a Marina di Cecina e Secche di Vada	1:30.000	Feb 2009
7	Da Capo Linaro ad Anzio	1:100.000	Jan 2008
8	Da Anzio a Capo Circeo e Isole Pontine	1:100.000	Jan 2008
134	Porto di Vibo Valentia Marina	1:5.000	Jun 2008
237	Porto di Trieste (Foglio Nord)	1:7.500	Aug 2008
238	Porto di Trieste (Foglio Sud)	1:7.500	Aug 2008
198	Porto di Barletta	1:5.000	Aug 2008
199	Porto di Manfredonia	1:10.000	Aug 2008
77	Porti di Anzio e Nettuno	1:6.000	Sep 2008

New Editions

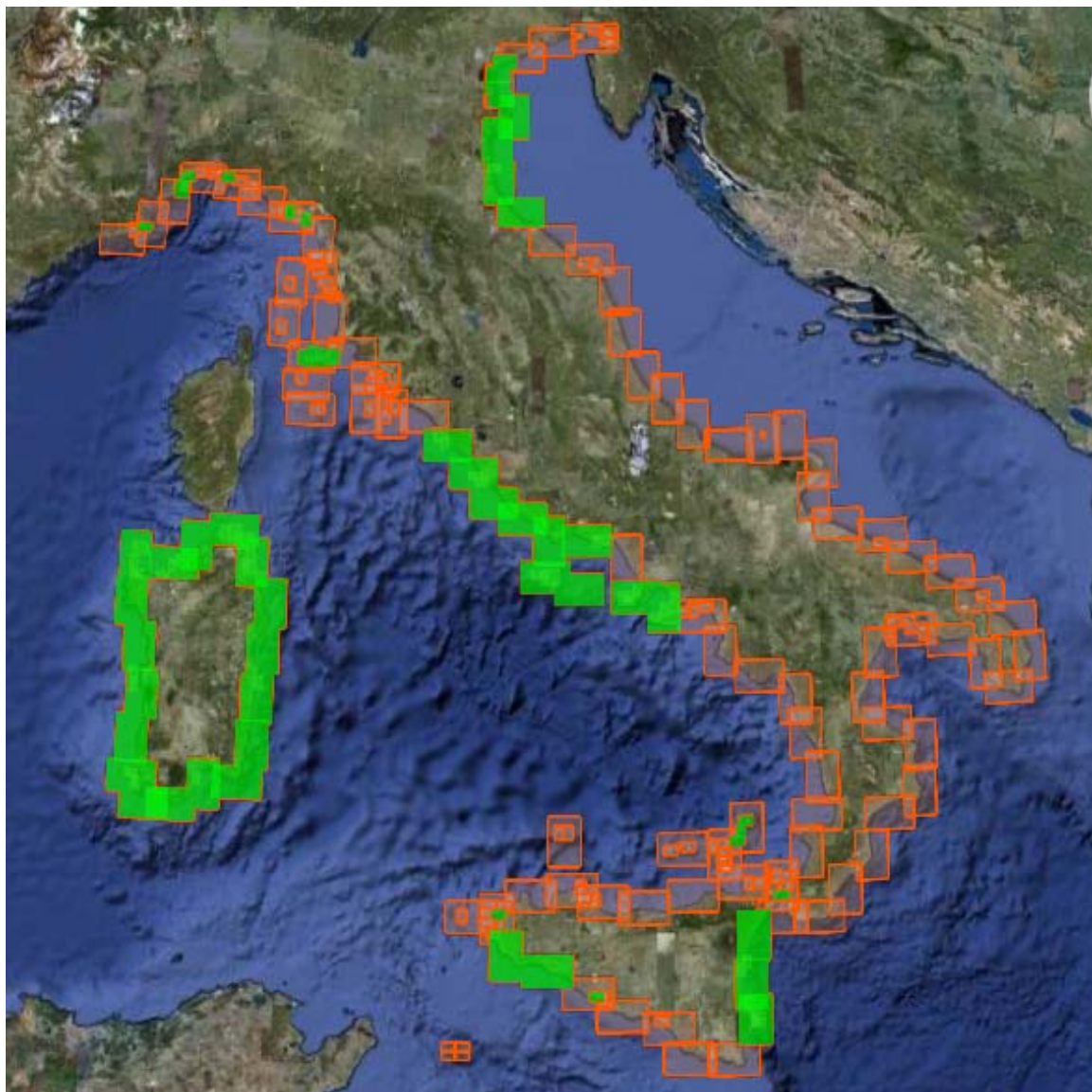
1315	Limiti ed Aree di interesse operativo	1:2.250.000	Apr 2009
1813	Stato dei rilievi nei mari italiani	1:2.250.000	Jan 2008
38	Dal Po di Goro a Punta Tagliamento	1:100.000	May 2007
222	Litorale di Venezia	1:50.000	Jun 2007

Under Production to be published within 2009

61	Porto di Marina di Carrara	1:5.000	
297	Porto di Carloforte	1:5.000	
145	Porti di Reggio Calabria e Villa S. Giovanni	1:5.000	
63	Porto di Viareggio	1:5.000	
78	Porto di Gaeta e Formia	1:10.000	
146	Porto di Crotone	1:6.000	
149	Porto di Gallipoli	1:7.500	
51	Porto di S.Remo	1:5.000	
257	Porto di Trapani	1:7.500	
209	Porto di Ancona	1:5.000	

¹ Will be published when the new Traffic Separation Scheme will come in force (end of 2009).

121	Litorale da Quercianella a Marina di Cecina e Secche di vada	1:30.000
193	Porto di Bari	1:6.000
244	Porto di Messina	1:5.000
295	Porti di Porto Vesme e Portoscuso	1:5.000
226	Venezia Porto di Lido	1:10.000
291	Porto di Oristano	1:10.000
281	Rade di La Maddalena e di S.Stefano	1:5.000
271	Rada e Porto di Augusta	1:10.000
212	Porto di Ortona	1:5.000
296	Porto di S.Antioco	1:5.000
2	Da Imperia a Portofino	1:100.000
272	Rada e porto di Catania	1:10.000
250	Rada e porto di Termini Imerese	1:10.000



New leisure charts (in green)

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

At the end of 2006 the Italian HO started the production of leisure paper charts.

From our own ENC database we derive a new kind of paper chart especially finalized to leisure navigation. Every chart is printed in a smaller format compared traditional charts, is printed on both sides of the folio and is printed on-demand.

The above picture shows the “coastal” (1:100.000) and “approach” (from 1:50.000 to 1:18.000) purposes coverage.

Total coverage achieved, according to Italian HO plans, at the beginning of 2008 leisure season.

g) Problems encountered

Chart production still follows separated production lines (paper, leisure and ENCs) but IIM is developing the new db-oriented production flow in order to optimize human resources and data management.

4. New publications & updates

a) New publications

Annual

Number	Title	Edition
I.I. 3132	EFFEMERIDI NAUTICHE 2009	2009
I.I. 3133	TAVOLE DI MAREA 2009	2009
I.I. 2024	L'AGENDA NAUTICA 2009	2009

Sailing directions

I.I. 3207	P7 DA CAPO SANTA MARIA DI LEUCA A SENIGALLIA	2008
I.I. 3208	P8 DA MAROTTA AL CONFINE ITALO SLOVENO	2008
I.I. 3204	P4 DA CAPO CIRCEO A SAPRI	2007
I.I. 3205	P5 DA MARATEA A LEUCA E COSTA DELLA SICILIA ORIENTALE	2007
I.I. 3206	P6 SICILIA MERIDIONALE E SETTENTRIONALE ED ISOLE MALTESI	2007

Others

I.I. 3001	CATALOGO GENERALE DELLE CARTE E DELLE PUBBLICAZIONI NAUTICHE	2009
I.I. 3167	LE CORRENTI DI MAREA NELLO STRETTO DI MESSINA	2008
I.I. 3134	ELENCO FARI E SEGNALI DA NEBBIA DA CANNES A SARANDA	2009

b) Updated publications

See above

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

N.A.

d) Problems encountered

None

5. MSI

a) Existing infrastructure for transmission

The Coast Guard Headquarters is the Italian responsible for the realization of GMDSS and Navtex Coordinator. Navtex is operational since April 2002 on freq. 518 kHz (English language) with 4 stations (Trieste, Roma, Cagliari, Augusta); efficiency and reliability are good.

The local dissemination of information is good and is assured by VHF radio communications and written documents.

b) New infrastructure in accordance with GMDSS

N.A.

c) Master Plan

N.A.

d) Problems encountered

None

6. S-55

a) Latest update

Nation/Area	A1	A2	B1	B2	C1	C2
ITALY	70%	43%	25%	56%	5%	1%

Top priorities are the not systematically surveyed areas and main harbours.

7. Capacity Building

Since the last Conference, four Officers from foreign countries (1 from Venezuela during academic year 2007/2008 and 1 Egyptian and 2 from Albania during a.y. 2008/2009) have successfully attended the courses in hydrography at the IIM.

In May 2009 the FIG/IHO/ICA International Board has endorsed Hydrography cat. B IIM Course that will enhance the capacity building offer already in place with Hydrography Cat. A course.

a) Offer of and/or demand for Capacity Building

As above

b) Training received, needed, offered

As above

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

Hydrographic data exchange agreements in force:

- Albania (multilateral), France, Greece, Spain, UK, Bulgaria, Romania, Ukraine, Croatia and Tunisia.

Agreements under consideration:

- Turkey, Albania (Bilateral), Slovenia, Egypt and Montenegro.

The IIM will continue to establish bilateral agreements with State that make specific request.

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

In May 2008 a technical visit was conducted on behalf of IHO in Albania. Main recommendation given:

- start immediately with the process of complete restructuration of AHS;
- begin to participate, as observer, at the IHO conference;
- begin the training of personnel.

In September 2008 another technical visit was held in Malta. Main recommendation given:

- in addition to of Regulation 9 of Chapter V of Solas which is part of Malta's Laws, to establish the duties of MHO (e.g. "providing and maintain adequate and efficient Hydrographic Surveys and Chart Production for Safety of Navigation"), similar to what is stated in article 6.(2) para d. of the Act for the Lighthouses and Signals Service;
- to re-survey the territorial waters of Malta, at least the three/four miles zone in very short time;
- to increase personnel, equipment and financial resources of MHO to conduct, independently, hydrographic surveys and chart/publication production;
- training is an essential need and training to personnel at Category A and B level is advisable. Any assistance and proposal offered from the IHO will be welcomed;
- the capability to perform shallow water survey with MB and Digital SSS should be explored;
- the existing survey boat should be upgraded or a new survey boat fully equipped for coastal survey purchased;
- a Hydrographic Sounding Database and a Cartographic Database should be created and managed;
- a new tide gauge station should be installed in Gozo;
- MHO to distribute MSI and Navigational Warning as convenient to other Countries;
- to survey the territorial waters as soon as possible;
- to request assistance to produce charts and publications and to become independent for chart/documentation production;
- to establish a National Indicative Plan to increase the capacity of MHO.

e) Definition of bids to IHO CBC

None

8. Oceanographic activities

a) General

Among the oceanographic activities, IIM conducted a survey called MREA 08 (Maritime Rapid Environmental Assessment) in the Ligurian Sea and Northern Tyrrhenian Sea, which involved several agencies including the NATO Undersea Research Center, INGV (Istituto Nazionale di Geofisica e Vulcanologia), CNR (Consiglio Nazionale delle Ricerche), OGS (Istituto Nazionale di Oceanografia e di Geofisica Sperimentale) and ENEA (National Agency for New Technologies, Energy and Environment). This activity was the evolution of a first phase conducted in 2007 and aims to test and develop methodologies and instrumentation suitable for smart acquisition of data and its processing in real time to meet military and Civil Defence needs.

Since January 2009 IIM is member of Italian Oceanographic Commission.

b) GEBCO/IBC's activities

In the past years, Italy had the opportunity to contribute to GEBCO with data extracted from the ENC. Using the software DecodeENC, distributed by IHB to IHO members State, Italy supplied GEBCO with bathymetric sounding point data, coastline, bathymetric contour and quality of data information for the area around Italy. The sounding point data set provided by Italy consists of 52.498 data points.

Italy strongly support the activity of GEBCO and asks to the MBSHC Countries to study the possibility to increase their sustain to the project and, at the same time, asks to the Commission to include in its report a statement of support of the GEBCO project.

c) Tide gauge network

IIM ensured the production and distribution of new editions of "Tide Tables" (I.I. 3133). IIM manages two tide stations located in Genoa and Brindisi, both stations are provided with an historical tide-gauge (Thomson) and a modern digital one (Thalimedes) connected through GSM network to the IIM data centre. As part of activities for the verification and updating of the harmonic constants for the prediction of the tidal amplitudes in the main Italian ports were acquired new equipment (OTT Kalesto), with radar level sensors, which will be deployed as needed.

d) New equipment

During last years, IIM acquire several new equipment:

- a new gravity corer, mod. ASW 104, for the unmolested collecting of carrots and water of bottom interface, to increase the operational capabilities of the survey ships, in the sector of the sediment sampling;
- two new tide-gauge with radar level sensor, mod. OTT Kalesto, initially installed in the harbours of Savona and Genova, soon will be displaced in other national harbours, within a program of updating of the harmonic constants;
- four small probes mod. Valeport Mini SVP for the measure of the Vs profile on board hydrographic survey boats;
- 1 probe CTD mod. Ocean Seven 316 Plus, of last generation, combined with system Rosette G.O. 1015, for the updating of the instrumentation available for the determination of chemical-physical parameters of the sea water.

e) Problems encountered

None.

9. Other activities

a) Participation in IHO Working Groups

The IIM is involved in several IHO WG, such as WEND, HSSC, HCA, HCIWWG, CSCPWG, MBSHC, ISPWG, GEBCO, FIG-IHO-ICA. Due to national budget restrictions Italy couldn't participate to all WG's meetings.

b) Meteorological data collection

Meteorological data are collected during hydrographic and oceanographic surveys, and at synoptic times during transfer navigation to operational area.

c) Geospatial studies

N.A.

d) Disaster prevention

N.A.

e) Environmental protection

N.A.

f) Astronomical observations

N.A.

g) Magnetic/Gravity surveys

IIM in collaboration with INGV (Istituto Nazionale di Geofisica e Vulcanologia) conducted several geomagnetic surveys, including following activities:

- seismic stratigraphy in Flegrei area and the Palinuro volcano (Tyrrhenian sea);
- environmental characterization for the detection, and subsequent intervention planning, of unexploded ordnance in Southern Adriatic Sea;
- detection of surface sedimentary deposits in La Spezia harbour.

h) International

N.A.

10. Any other business.

IIM provided the Italian Naval Register (RINA) a technical guide aimed to grant certification of quality for surveys at sea conducted by private firms. This guide is compliant with S-44 regulations and it is seen as a good mean for improving the quality and consistency of hydrographic data collected by different entities.