



Consiglio Nazionale delle Ricerche

ITALIAN UPDATE 2010

National Research Council (CNR)

Di Bitetto M., Magnifico G., Mazzola S., Trincardi F.

Operative Programming Office

Central Management for Programming and Infrastructures

13th **E**uropean **R**esearch **V**essel **O**perators Annual Meeting
Oristano - Italy
9 - 11 May 2011

ABOUT CNR

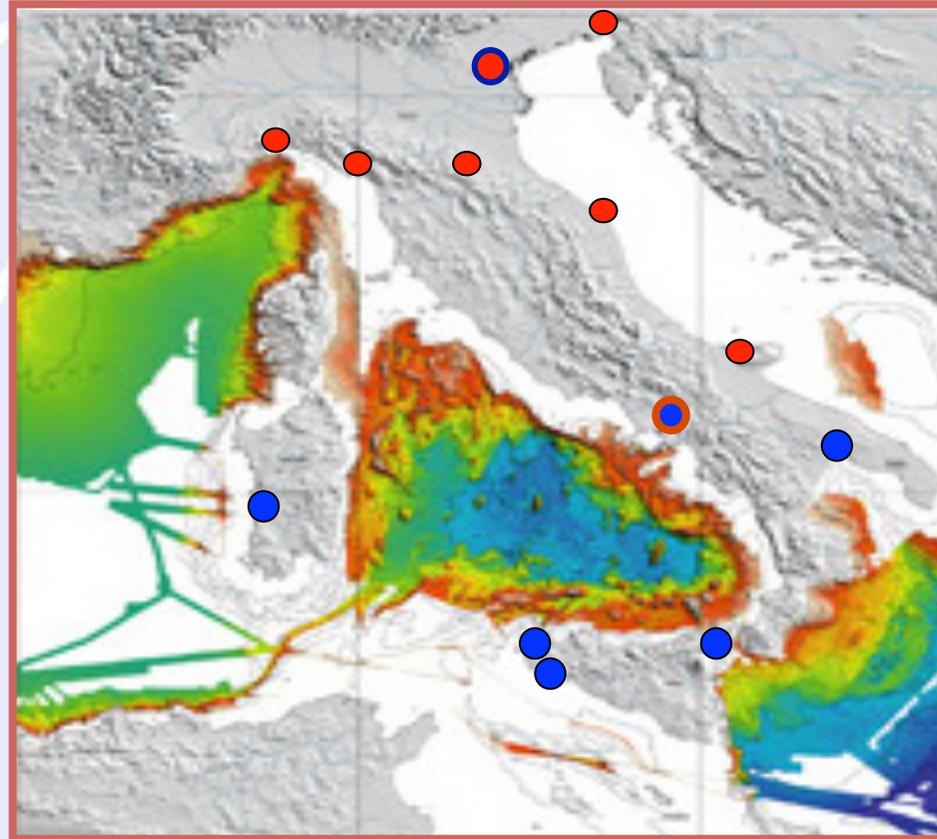
- **CNR** is the largest public research structure in Italy. The scientific fields cover a variety of issues from Humanities to Nanotechnology.
- **CNR's mission:** Perform, promote, broaden, transfer and improve research activities in the main development fields of knowledge for the scientific, technological, economic and social development of Italy.
- **107** Institutes, located in about 300 different sites around the country;
11 Scientific Departments organized in **83** Research Programs.



MARINE SCIENCES AT CNR

IAMC

- **NAPOLI**
- ORISTANO
- TARANTO
- MESSINA
- MAZZARA
- CAPO GRANITOLA



ISMAR

- **VENEZIA**
- TRIESTE
- GENOVA
- LA SPEZIA
- BOLOGNA
- ANCONA
- LESINA

- Other Institutes have teams working in remote sensing (ISAC), marine technologies (ISSIA), geologic hazard (IGAG), biogeochemistry (IBF) and water quality (IRSA)



RESEARCH VESSELS AT CNR

- **Operative Programming Office** manages CNR's oceanic research infrastructures.
- Coordinates the evaluation of oceanographic cruise proposals the cruise scheduling and foresees the ship instrumentations.
- Coordinates national and international cooperation with other organizations.
- Coordinates the oceanographic observation system of Platforms, Buoys and long-term mooring stations.



ASSESSMENT PROCESS FOR OCEANOGRAPHIC CRUISES

**REALIZATION
OF PLANNED
CRUISES**

- Cruise plan optimization
- Diffusion and adjustments

**CRUISE
PLANNING**

- Marine Commission
- Dispatch of proposals to anonymous referees for scientific assessment
- Commission gives final response considering scientific and functional evaluation

**ASSESSMENT
OF
PROPOSALS**

**SHIP TIME
PROPOSALS
APPLICATION**

- Invitation to all Istitute Directors
- On-line procedure for applications

**Convenient system
(for researchers):**

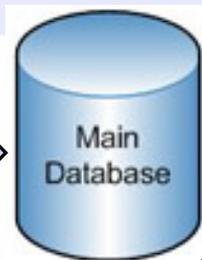
- Cruises scheduled year by year;
- Attempt to minimize transit time;
- Cruise schedule is fixed.



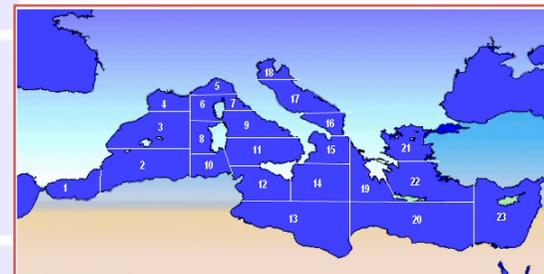
ON-LINE PROCEDURE

APPLICATION DETAILS

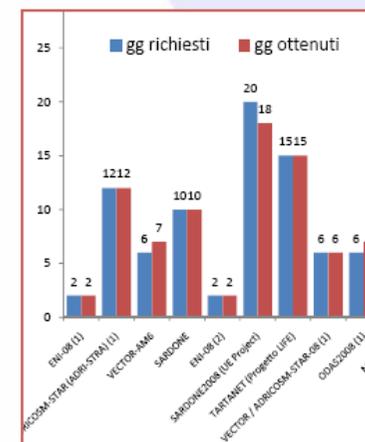
CNR STRUCTURE
SHIP NAME
WORKING AREA
CRUISE PERIOD
ACTIVITIES
SCIENTIFIC AREA
EXPECTED SCIENTIFIC RESULTS
SCIENTIFIC PRODUCTS
CRUISE DETAILS (PLANNING and OTHER INFO)
PARTNERS
EQUIPMENT ON BOARD
EXTERNAL FINANCIAL FUNDS
PERSONNEL



WORKING AREAS



STATISTICS



CRUISE PRELIMINARY SCHEDULING



Porti	Partenza / Arrivo	gg	Nome Campagna	Resp. Scientifico	Istituto
Messina - Messina	01/07 al 10/07	10	MARE 2009	Rinelli	IAMC
Messina - Brindisi	11/07 al 23/07	12	STAR09	Ravaloli Gugli	ISMAR
Brindisi - Messina	24/07 al 17/08	25	MAGIC - ISMAR_03	Trincardi Fogliani	ISMAR
Messina - Messina	18/08 al 22/08	5	MAGIC - ISMAR_02	Marani	ISMAR
Cagliari - Porto Torres	24/08 al 22/09	30	MAGIC IAMC 01/09	Tonielli	IAMC
Porto Torres - Porto Torres	23/09 al 19/10	27	MAGIC - ISMAR_01	Gamberi	ISMAR
Napoli - Napoli	26/10 al 10/11	14	MAGIC - IGAG 01	Bosman	IGAG
Napoli - Porto Torres	12/11 al 12/12	30	MAGIC IAMC 01/09	Tonielli	IAMC
Porto Torres - Porto Torres	15/12 al 23/12	8	CORSICA_09	Gasparini	ISMAR

To be implemented:

- Cruise report on-line data base;
- Shared meta-data for all cruises.



<http://www.cnr.it/sitocnr/UPO/gestione/infoce/UPOinfoce.html>

CNR-->UPO-->Organizzazione - Mozilla Firefox

http://www.cnr.it/sitocnr/UPO/

Consiglio Nazionale delle Ricerche

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Ufficio Programmazione Operativa

Organizzazione

Relazioni funzionali
Staff
Contatti

Supporto organi vertice
Supporto rete scientifica
Supporto alla gestione
Link utili

Regione Lombardia
MIND IN ITALY
Milano
6 ottobre 2008

Direzione Centrale Supporto alla Programmazione
Ufficio Programmazione Operativa

Organizzazione

Direttore
Dott. Massimiliano Di Bitetto
Tel. 06 4993 2650
massimiliano.dibitetto@cnr.it

Vicario
Dott. Giovanni De Simone
Tel. 06 4993 3461
giovanni.desimone@cnr.it

Segreteria
Sig.ra Daniela Bagazzini (Responsabile)
Tel. 06 4993 2505 - Fax 06 4993 2506
segreteria_uo@cnr.it

III Piano Ala Vecchia
Stanza n. 340
Piazzale Aldo Moro, 7
00185 ROMA

Truva: ISMN
Successivo | Precedente | Evidenzia | Maiuscole/minuscole | Fine della pagina raggiunta
Completato

CNR-->UPO-->Navi - Mozilla Firefox

http://www.cnr.it/sitocnr/UPO/gestione/infoce/navi/UPOnavi.html

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Ufficio Programmazione Operativa

Organizzazione

Supporto organi vertice
Supporto rete scientifica
Supporto alla gestione
Link utili

Infrastrutture oceanografiche

Navi
Campagne oceanografiche
Acqua Alta
Odas
Altre Navi Italiane
Scenario internazionale
Progetto EUROFLEETS
Attività Fondo Rotazione
Link utili

DCSPI - Ufficio Programmazione Operativa

Navi

Nave Urania
[Calendario Urania 2009](#)

Parametro	Misura
L.F.T.	61.30 m
Larghezza	11.10 m
Pescaggio min/max	3.10 - 3.60 m
Stazza	1000 TS

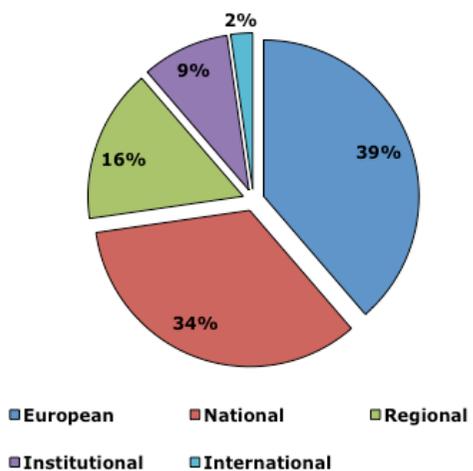
La nave oceanografica Urania ha un'autonomia di 45 giorni e può ospitare un massimo di 36 uomini tra personale scientifico ed equipaggio. La gamma di velocità per il rilevamento continuo varia tra 1,5 e 11 nodi. Il sistema di propulsione è costituito da due eliche a passo variabile azionate da due motori da 1000 KW e da un'elica prora da 220 KW. La nave è equipaggiata con un sistema di posizionamento dinamico Simrad per manovre di precisione. La nave ospita laboratori per analisi, campionamento geologico, laboratori chimici e radiologici e consente l'elaborazione di dati di navigazione, geofisici e quelli acquisiti con il R.O.V. (Remote Operated Vehicle) e con la sonda multiparametrica. Gli strumenti geofisici comprendono un profilitore Chirp Datasonic, uno Sparkler, un profilitore Sub-Bottom da 3,5 KHz, un Uniboom, un sonar a scansione laterale da 100 - 500 KHz e un magnetometro. Per quel che riguarda i sistemi di campionamento (operanti fino alle massime profondità del Mediterraneo) sono disponibili campionatori a gravità ed a pistone, box corer, benne (Shipek e Van Veen) e draghe. È inoltre possibile utilizzare zone multiparametriche e multicampionatori, CTD, dispositivi per analisi biologiche e R.O.V.

Truva: ISMN
Successivo | Precedente | Evidenzia | Maiuscole/minuscole | Fine della pagina raggiunta; si continua dall'inizio
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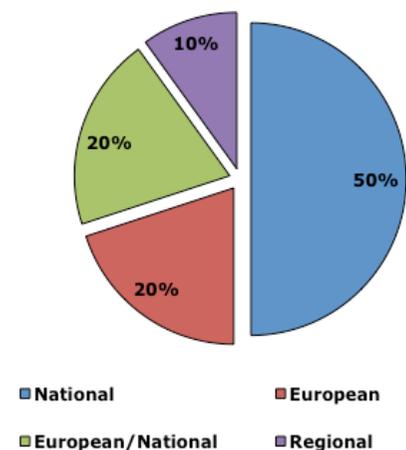


THREE SHIPS OPERATED IN 2010

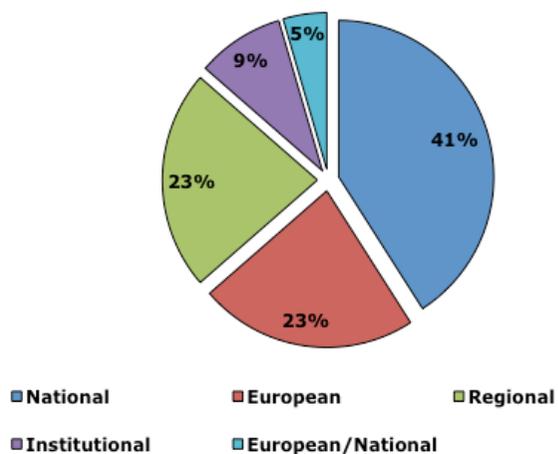
RV URANIA



RV DALLAPORTA



RV MARIA GRAZIA



"URANIA" RESEARCH VESSEL



Main technical features:

- Category: Oceanic
- Tonnage: 1115 GRT
- Length: 61.3 m
- Breadth: 11.1 m
- Height: 5.3 m
- Draught : 3.6 m
- Max speed: 13 Knots
- Average speed: 11.0 Knots
- Endurance: 45 days
- Crew: 16 people
- Scientists: 20 people
- Construction year: 1992

Year	N. surveys	Days at sea
2009	18	324
2010	22	338
2011*	21	336



"URANIA" FACILITIES

Main Activity	Oceanography			
Operating Area	Mediterranean Sea			
CTD	YES			
Coring	Grab sampler	Gravity corer		Piston Corer (25m)
Underwater Vehicle Capabilities	Underwater Vehicle Support			ROV
Fixed Equipment	Navigational Equipment Navtex FURUNO NX500; Doppler Speed Log DS70; MUFAX FURUNO 208A; Eco sounder KODEN CVS8805; DGPS SEASTAR; GPS KODEN KGP900; Radar FURUNO FR2020; Radar KODEN MD3220; Gyro Compass POLARIS MK2 (2); Gyro Compass MARSH TSS	Communications Equipment VHF Sea Master; VHF Sailor; VHF Handset GMDSS SKANTI; GMDSS Station: Inmarsat C, Inmarsat B; Radio reciver MF/HF 8000; Satellitar Phone Globalstar; E_mail edata	Satellite Communicati ons Equipment GlobalStar; InmarSat	DGPS (seastar 9600); GPS (Asctech 4800); GPS (Koden 4800)
	Echosounders Atlas Deso25 (12kHz, 100kHz) – (33KHz, 210KHz) – CHIRP sonar (16 transducers)	Side Scan Sonar EDGE TECH DF1000 and 260 TH 272TD	Multibeam Kongsberg EM710	Acoustic Doppler Current Profiler RDInstrument Ocean Survey 75kHz 50kHz
	Winches 4	Gantry YES	Crane YES	

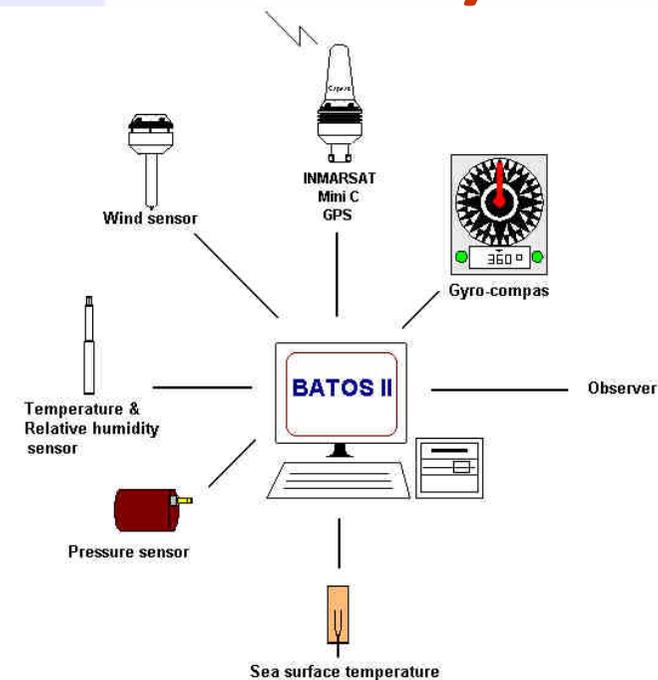


- Single- and Multi-channel seismic devices to be improved for 2012

BATOS System (Meteo France)

Automatic Weather Station BATOS II is composed by:

- ultrasonic anemometer
- air temperature and humidity sensor
- pressure sensor
- surface temperature sensor
- gyro compass
- NMEA output (5s)



Pressure, humidity, air and sea surface temperature and wind are measured **every hour** and **automatic** transmitted to **the GTS**. NMEA meteo data are collected, integrated with nav data and uploaded onshore every 5-10 minutes by ISMAR software DAPHNE

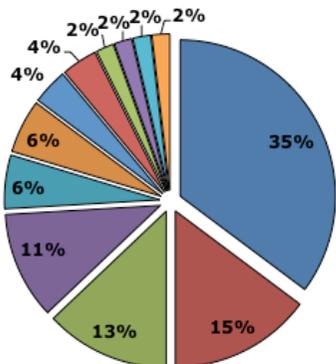
BATOS data must be complemented with visual observations of current weather conditions, sea state and cloud cover made at synoptic hours by volunteer scientific personnel on board the R/V Urania

Combination on automatic measurements and visual measurements allow to have the first complete weather station over the MEDITERRANEAN Sea



"URANIA" OCEANOGRAPHIC SURVEYS 2010

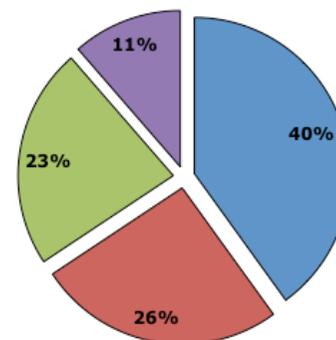
WORKING AREAS



- Thyrrhenean Sea
- Adriatic Sea
- Sardinia Channel
- Eastern Mediterranean Basin
- Atlantic Sea
- Ionian Sea
- Sicily Strait
- Western Mediterranean Basin
- Sardinia Sea
- Aegean Sea

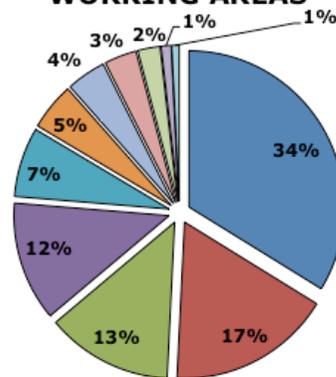
N. surveys

GENERAL DISCIPLINES



- Marine geology
- Oceanography
- Marine ecology and monitoring
- Stock assessment

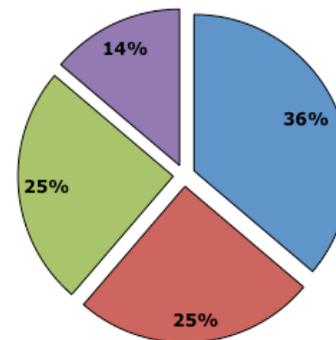
WORKING AREAS



- Thyrrhenean Sea
- Ionian Sea
- Eastern Mediterranean Basin
- Western Mediterranean Basin
- Balearic Sea
- Adriatic Sea
- Sicily Strait
- Sardinia Channel
- Sardinia Sea
- Atlantic Ocean

Days at sea

GENERAL DISCIPLINES



- Marine geology
- Oceanography
- Marine ecology and Monitoring
- Stock assessment



"MARIA GRAZIA" RESEARCH VESSEL



Main technical features:

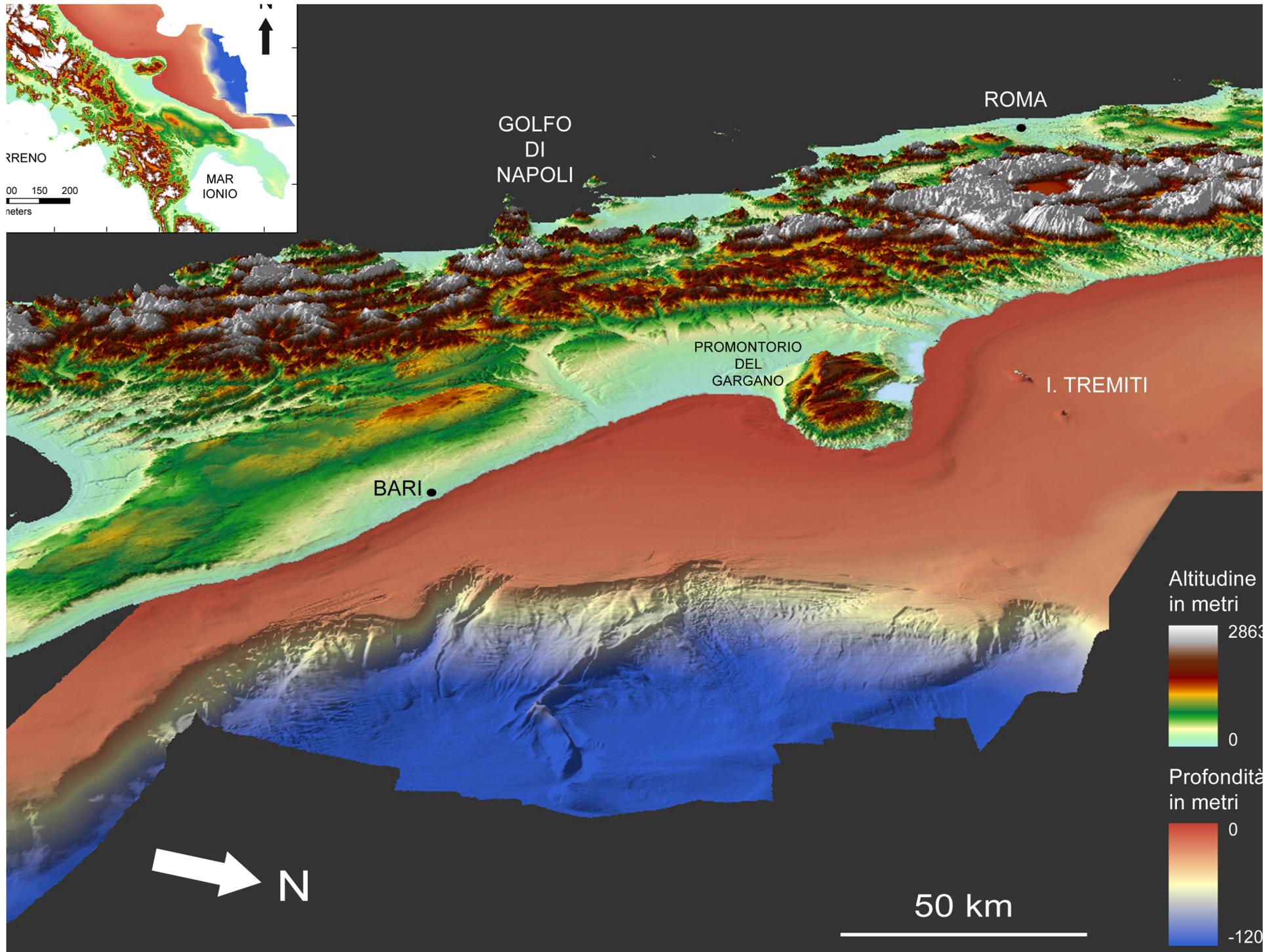
- Category: Regional
- Tonnage: 120 Tons
- Length: 42.4 m
- Breadth: 8.8 m
- Draught: 3.2 m
- Max speed: 16.0 Knots
- Average speed: 866 kW
- Autonomy: 30 days
- Crew: 8 people
- Scientists: 10 people
- Construction year: 2004

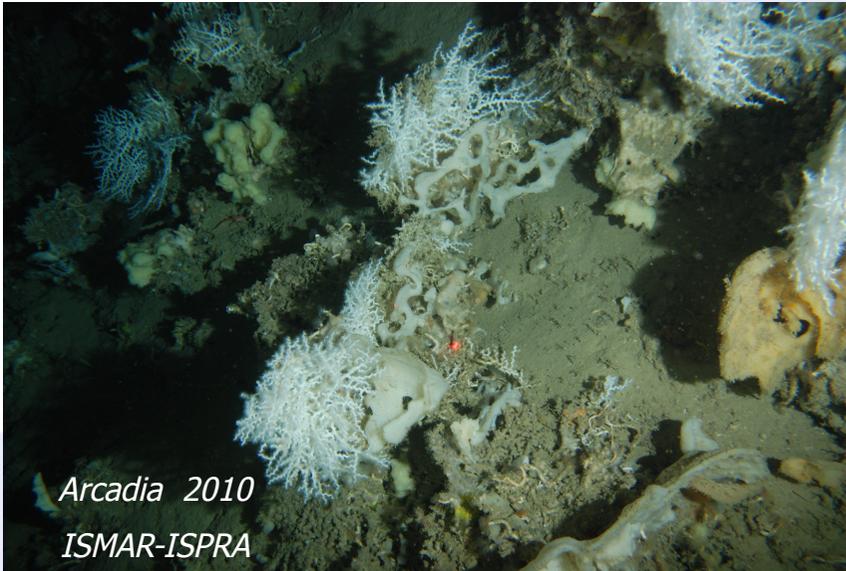
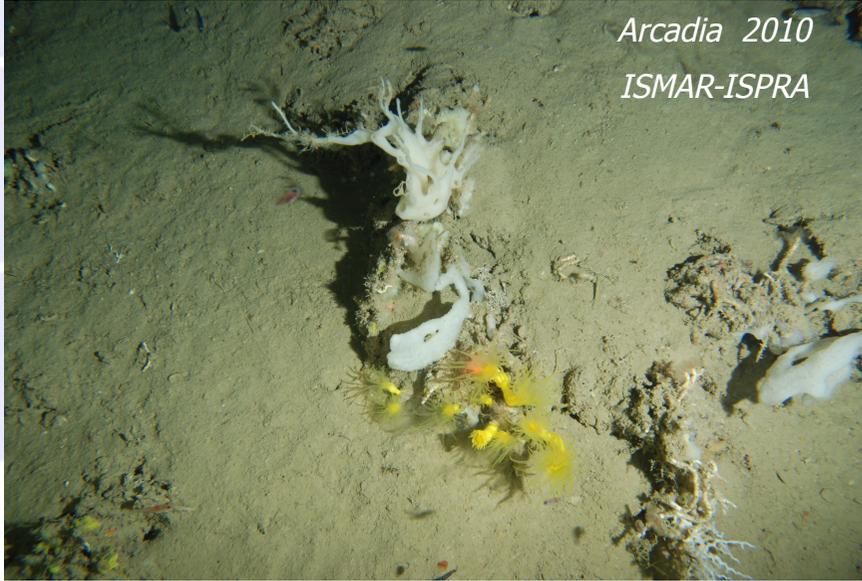
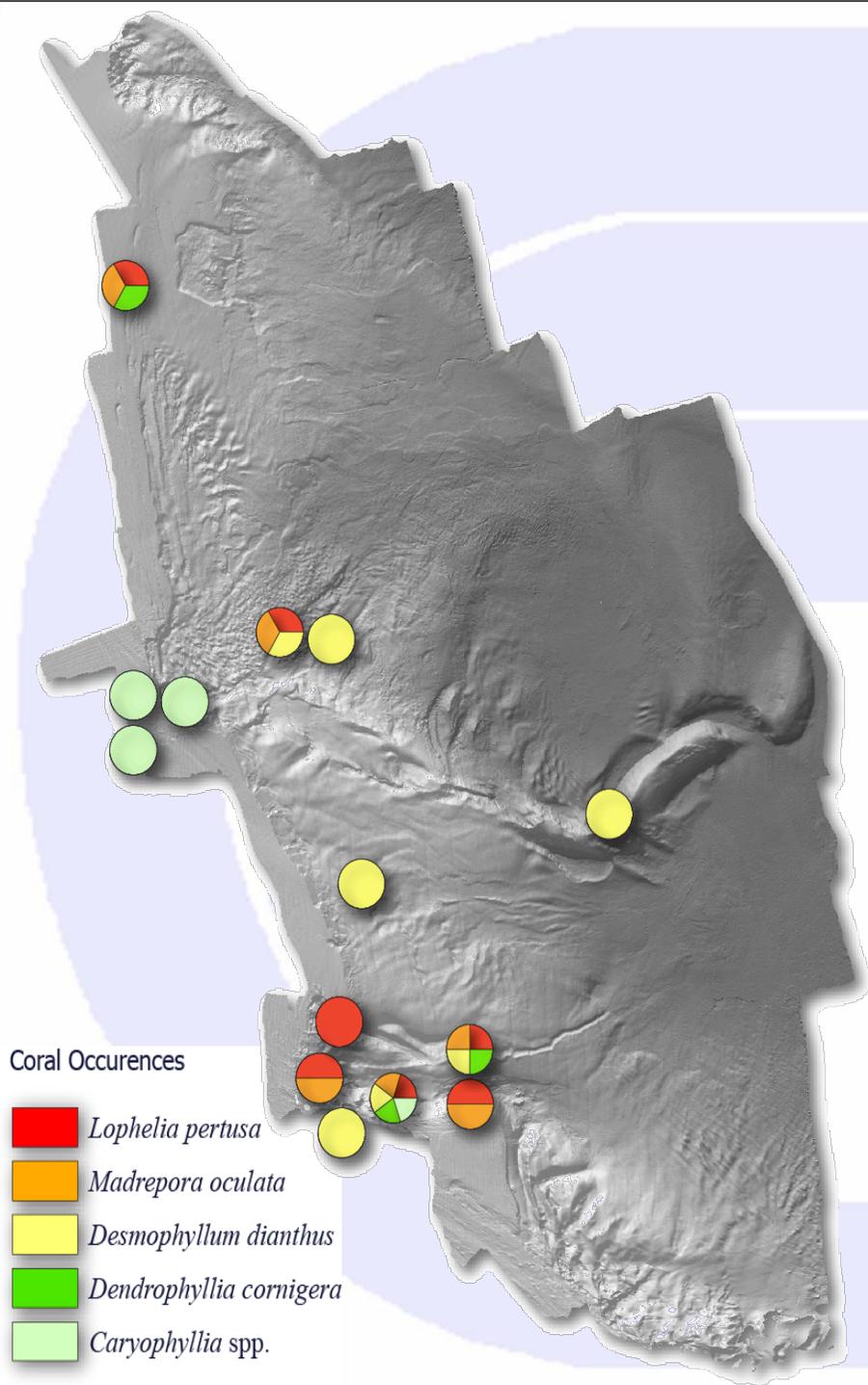
Kongsberg EM3002D

Year	N. surveys	Days at sea
2009*	8	166
2010	13	277

* First operational year







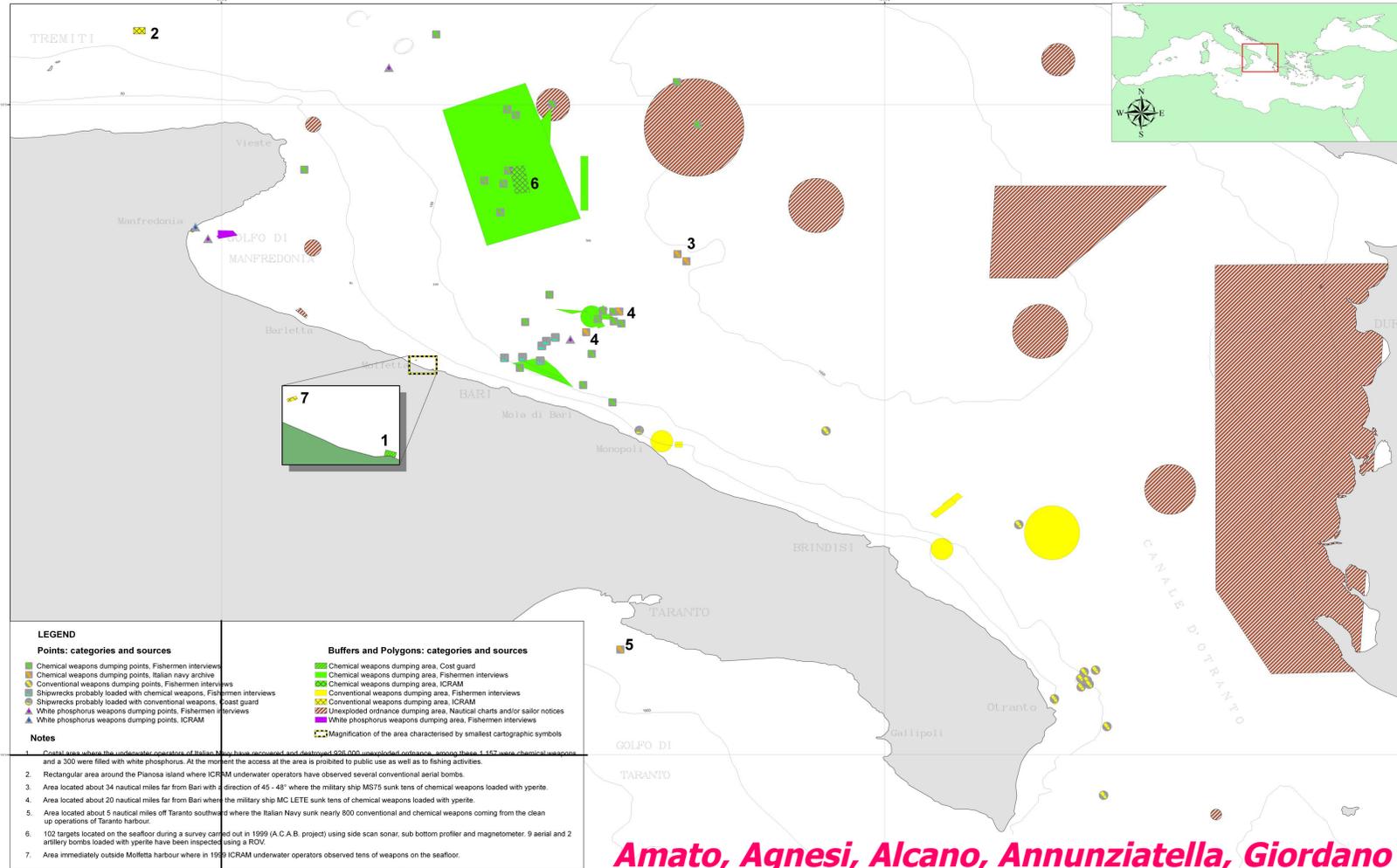


MAP OF UNEXPLODED ORDNANCE DUMPING SITES IN THE SOUTHERN ADRIATIC SEA



R.E.D. C.O.D. project (Research on Environmental Damage caused by Chemical Ordnance Dumped at sea)
co-financed by the European Commission DG Environment (action B4-3070/2003/368585/SUB/D.3).
Amato E., Agnesi S., Alcaro L., Annunziatellis A., Giordano P.

0 5 10 20 30 40 Miles
Geographic Projection Datum: ED 50



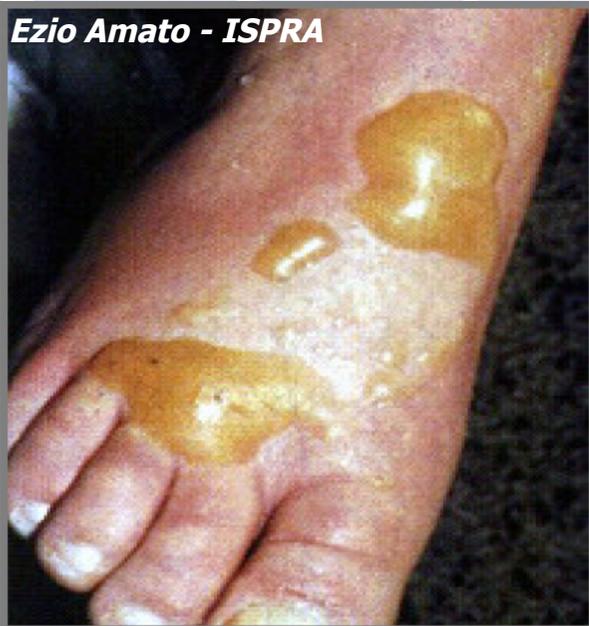
“DANGEROUS LITTER” IMPACT ON FISHING

ACTIVITIES
Ezio Amato - ISPRA

Fisherman have been victims of numerous incidents due to the accidental recovery of chemical weapons in their trawling net.



Ezio Amato - ISPRA



In several cases the incidents reported referred to contamination by yperite and white phosphorous.

Direct contact with this agent leaking from the bombs cause severe blistering effects

OTHER ITALIAN RESEARCH VESSELS

Astrea



Universitatis



Italica



Explora



N/R OGS Explora



OTHER

CNR OCEANOGRAPHIC INFRASTRUCTURES

ODAS ITALIA 1

Buoy



Ligurian Sea

37 nmi from the coast

1300 m w.d.

ACQUA ALTA

Oceanographic platform



Adriatic Sea

10 nmi from the coast

16 m w.d.



OTHER ITALIAN RESEARCH VESSELS

Andrea



Luigi Sanzo



Tecnopesca II



Cerruti



Vega



Trer



- Italian casts are almost 8000 km
- Many Institutions dealing with coastal research; there is a need of more coordination and sharing of facilities

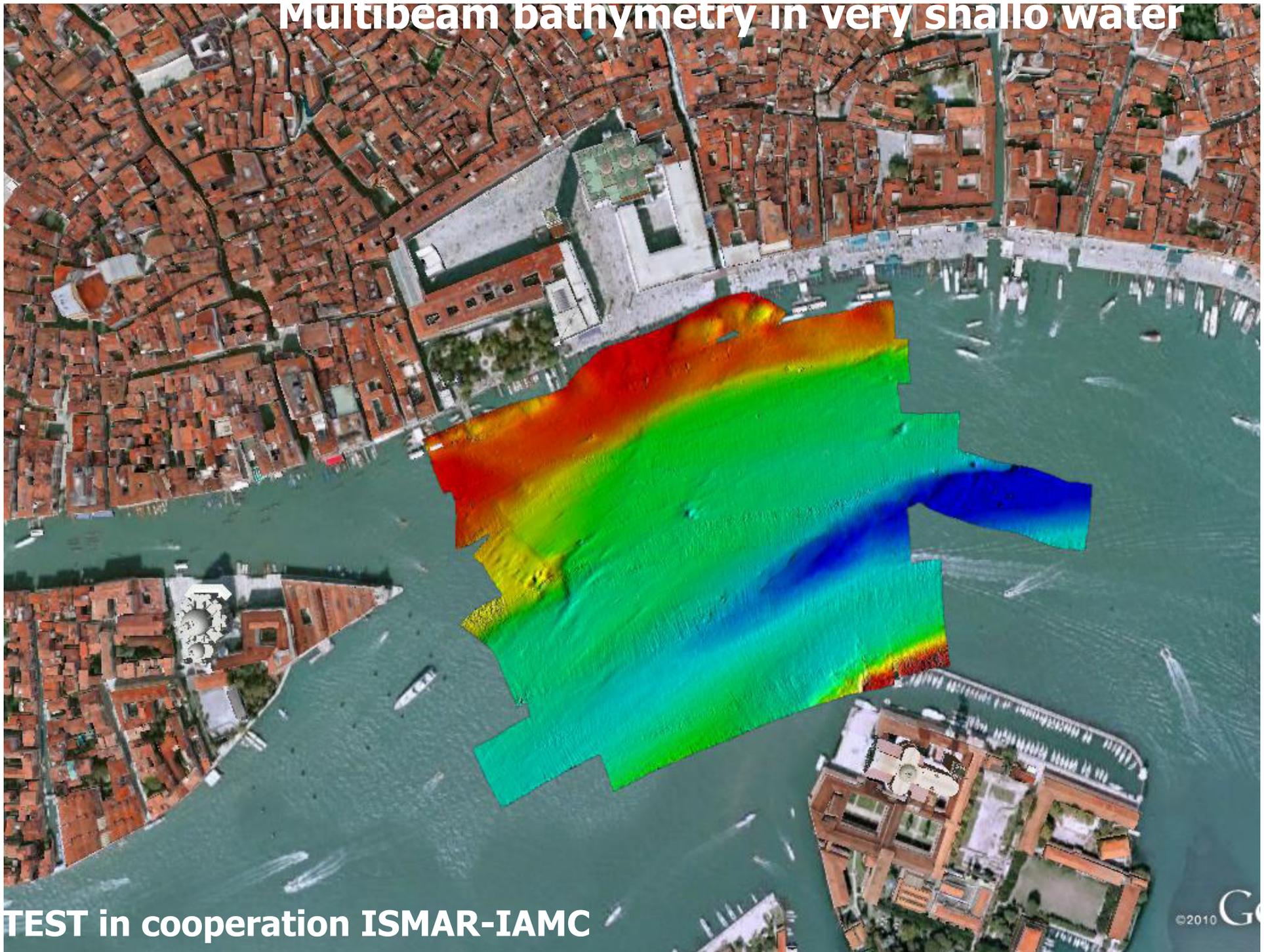


New frontiers in shallow waters: bathymetry of Murano canals (Venice Lagoon)



Courtesy F. Madricardo ISMAR, 4/6/2010

Multibeam bathymetry in very shallow water



TEST in cooperation ISMAR-IAMC

