

**IHO HYDROGRAPHIC COMMITTEE ON ANTARCTICA (HCA)
12th Meeting, Montevideo, Uruguay, 10-12 October 2012**



NATIONAL REPORT – BRAZIL

Hydrographic Office / Directorate of Hydrography and Navigation (DHN)
Service:

1. Surveys: During the 30th Antarctic Commission (OPERANTAR XXX), performed by the Brazilian Navy Polar Ship ALMIRANTE MAXIMIANO in 2011/2012, bathymetric surveys with multibeam echo sounder were conducted in areas covered by the nautical charts 25120 - King George Bay, 25121 - Admiralty Bay (King George Island) and 25122 - Maxwell Bay (King George Island). Among other operations, continuous profiling of currents with the ADCP hull and XBT launches were done, the sub-bottom profiler (SBP300) was used together with the multibeam echosounder and GEBCO surveys took place.
2. New charts & updates: Brazil has concluded its Antarctic Cartographic Planning. Six (06) nautical charts were produced:
- Nautical Charts (paper):**
- 25110 (INT 9150) – Antártica: Ilha Elefante e Proximidades, 1:200.000, Ed. 2009;
 - 25115 – Antártica: Ilhas Shetland do Sul – Ilha Elefante, 1:100.000, Ed. 2005;
 - 25119 – Antártica: Ilhas Shetland do Sul - Baía Serratt, 1:40.000, Ed. 2008;
 - 25120 – Antártica: Ilhas Shetland do Sul - Baía Rei George, 1:40.000, Ed. 2008;
 - 25121 – Antártica: Ilhas Shetland do Sul - Baía do Almirantado, 1:40.000, Ed. 2009; Inset A: Enseada Martel , 1:20 000; and Inset B: Estação Comandante Ferraz, 1:5.000; and
 - 25122 – Antártica: Ilhas Shetland do Sul - Baía Maxwell, 1:40.000, Ed. 1994; and Inset: Enseada Ardley e Baía Edgell, 1:20.000.
- ENCs:**
- BR3 25110 – Ilha Elefante e Proximidades, 1:180.000;
 - BR4 25121 – Baía do Almirantado (Ilha Rei George), 1:45.000;

and
- BR5 25121 – Enseada Martel, 1:12.000.

3. New publications
& updates: X X X

4. MSI On May, DHN (Brazil) and CBSC (OHI) promoted a MSI Capacity Building training course in Niterói, Brazil. The training course was attempted by representatives from Argentina, Chile, Peru, Uruguay and Brazil, among others countries.

5. S-55 Not applicable to INT Region M.

6. Capacity Building

a) Training needed: X X X

b) Training and courses offered:

COURSE	DESCRIPTION	DURATION
C-Esp-HN	Aims to qualify the student to be a technician in Hydrography and Navigation issues.	42 weeks
C-Ap-HN	Aims to increase the capability of the student to be a technician in Hydrography and Navigation.	35 weeks
CAHO (IHO Cat."A")	Aims to provide the student with the capability to plan, to conduct and to execute the activities related with the Hydrographic Service.	50 weeks
Hydro 1	Aims to provide the student with the capability of planning a hydrographic survey.	66 hours
Hydro 2	Aims to provide the student with the capability of conducting and executing a hydrographic survey using singlebeam ecosounders, multibeam ecosounders and side scan sonars.	98 hours
Tide	Aims to introduce the tide theory learning, how to predict and how to get a harmonic analyses for a hydrographic survey use.	83 hours
Cartography Projections	Aims to provide the student with the capability of identifying and using the cartographic projection systems commonly applied in hydrography.	51 hours
Nautical Chart Production	Aims to provide the student with the capability of describing the processes of the construction and updating of a Nautical Chart.	37 hours
Training in singlebeam acquisition and processing	Aims to promote a day-by-day follow up of the singlebeam acquisition and of the processing tasks onboard.	-
Training in multibeam acquisition and	Aims to promote a day-by-day follow up of the multibeam acquisition and of the processing tasks onboard.	-

COURSE	DESCRIPTION	DURATION
processing		
Training in Side Scan operation	Aims to promote a day-by-day follow up of the side scan operation onboard.	-
Training in gauge operation	Aims to promote a day-by-day follow up of the gauge operation onboard.	1 week
Training in GPS survey and post processing	Aims to provide the student with the capability of planning a GPS network, carrying out a classical survey, post-processing baselines and adjusting geodetic coordinate network stations.	1 week
Training in oceanographic data acquiring and post-processing	Aims to promote a training on CTD, ADCP Thermosalinometer operation and data processing	2 weeks

c) Projects under development: XXX

7. Oceanographic activities
- General: from October to November 2011, during the 5th oceanographic survey at Antarctic Waters done by CHM personnel, in OPERANTAR XXX, the Brazilian Navy Polar Ship ALMIRANTE MAXIMIANO acquired oceanographic data from CTD/rosette, Thermosalinograph and water samples for chemical analysis. Drifting buoys were deployed as well as XBT. Current measurements were also taken, along with CTD/rosette deployments supporting Brazilian Scientific Community. During next OPERANTAR XXXI it is planned the acquirement of more oceanographic data in order to support Brazilian scientific projects.
- GEBSCO/IBC's activities: routine GEBSCO soundings were performed by the Brazilian Navy Polar Ship ALMIRANTE MAXIMIANO during all the OPERANTAR XXX operations. Problems detected: due to the isolation and harsh conditions of the Antarctic region, it is always necessary to keep a large number of spare equipments and parts to adequately perform the oceanographic measurements.
8. Other activities
- Participation in IHO Committees / Working Groups: HSSC, IRCC, MACHC, SWAtHC, HCA, TSMAD, SNPWG, DPSWG, CSPCWG, DQWG, MSDIWG, TWLWG, HDWG, EUWG, ABLOS, WWNWS, CBSC, WENDWG, IBSC, GEBSCO-SCUNF, GEBCOTSCOM, IEHG, PAC-PRIMAR, IMO-NAV, IC-ENC.
9. Conclusions
- DHN continues its commitment to carrying forward hydrographic activities through the work of the Hydrographic Commission on Antarctica.

