

**IHO HYDROGRAPHIC COMMITTEE ON ANTARCTICA (HCA)  
11th Meeting, Hobart, Australia, 5-7 October 2011**

**NATIONAL REPORT – BRAZIL**

Hydrographic Office / Service:	Directorate of Hydrography and Navigation (DHN)
1. Surveys:	<p>Bathymetric surveys were not performed in 2010.</p> <p>In 2011 (by Navy Ship ALMIRANTE MAXIMIANO), is expected to carry out bathymetric survey with multibeam echo sounder, the areas covered by the charts 25120 - King George Bay, 25121 - Admiralty Bay (King George Island) and 25122 - Maxwell Bay (King George Island). During the surveys with multibeam echo sounder, she will operate the sub-bottom profiler (SBP300). There will be continuous profiling of currents with the ADCP hull and XBT launches.</p>
2. New charts & updates:	<p>Brazil has concluded its Antarctic cartographic plan. It has been published 6 nautical paper charts and 3 ENCs . They are:</p> <p><b>Nautical Charts:</b>  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.</p> <p><b>ENCs:</b>  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.</p>
3. New publications & updates:	xxx
4. MSI	DHN (Brazil) and CBSC (OHI) promoted a MSI Capacity Building training course, at May 16-20, in Niterói, Brazil. Attended this training representatives from Argentina, Chile, Peru, Uruguay and Brazil, among others countries.
5. S-55	Not applicable to INT Region M.

6. Capacity Building
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- a) Training needed: XXX
- b) Training and courses offered:

COURSE	DESCRIPTION	DURATION
C-Esp-HN	To qualify the student to be a technician in Hydrography and Navigation issues.	42 weeks
C-Ap-HN	To increase the capacity of the student to be a technician in Hydrography and Navigation.	35 weeks
CAHO (IHO Cat."A")	To provide the student with the capacity to plan, to conduct and to execute the activities related with the Hydrographic Service.	50 weeks
Hydro 1	To plan a hydrographic survey.	66 hours
Hydro 2	To conduct and to execute a hydrographic survey using singlebeam ecosounders, multibeam ecosounders and side scan sonars.	98 hours
Tide	To introduce the tide theory learning how to predict and how to get a harmonic analyses to a hydrographic survey use.	83 hours
Cartography Projections	To identify and to use cartographic projection systems commonly applied in hydrography.	51 hours
Nautical Chart Production	To describe the processes of the construction and updating of a Nautical Chart.	37 hours
Training in singlebeam acquisition and processing	To promote a day by day follow up of the singlebeam acquisition and of the processing tasks onboard.	-
Training in multibeam acquisition and processing	To promote a day by day follow up of the multibeam acquisition and of the processing tasks onboard.	-
Training in Side Scan operation	To promote a day by day follow up of the side scan operation onboard.	-
Training in gauges operation	To promote a day by day follow up of the gauge operation onboard.	1 week
Training in GPS survey and post processing	To plan a GPS network, to carry out a classical survey, to post-process baselines and to adjust geodetic coordinate network stations.	1 week
Training in oceanographic data acquiring and post-processing	To promote a training on CTD, ADCP Termosalinometer operation and data processing	2 weeks

- c) Projects under development: XXX

7. Oceanographic activities	<p>General: By the end of 2011, it will be conducted the fourth oceanographic survey at Antarctic Waters, during OPERANTAR XXX, performed by the Navy Ship ARY RONGEL. The Navy Ship ALMIRANTE MAXIMIANO has taken ADCP current measurements during OPERANTAR XXIX, and is now testing CTD/rosette for deep deployments for the upcoming OPERANTAR.</p> <p>GEBCO/IBC's activities: routine GEBCO soundings have been performed by the Navy Ship ARY RONGEL during all her annual campaign.</p> <p>OPERANTAR operations: Problems encountered: due to the isolation and harsh conditions of the Antarctic region, it is necessary to keep a large number of spares equipments and parts to adequately perform the oceanographic measurements.</p>
8. Other activities	<p>Participation in IHO Committees / Working Groups and others: HSSC, IRCC, MACHC, SWAtHC, HCA, TSMAD, SNPWG, DPSWG, CSPCWG, DQWG, MSDIWG, TWLWG, HDWG, EUWG, ABLOS, WWNWS, CBSC, WENDWG, IBSC, GEBCO-SCUNF, GEBCO-TSCOM, IEHG, PAC-PRIMAR, IMO-NAV, IC-ENC.</p>
9. Conclusions	<p>DHN continues its commitment to carrying forward hydrographic activities through the work of the Hydrographic Commission on Antarctica.</p>