MACHC16-03D

MESO AMERICAN AND CARIBBEAN SEA HYDROGRAPHIC COMMISSION
16th Meeting – St. John, Antigua and Barbuda
(7-12 December 2015)

NATIONAL REPORT – BRAZIL

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

Surveys (MACHC region):
Coverage of new surveys: during 2015, Brazilian Navy Hydrographic Ships conducted surveys on the Amazon Basin and in the north region of NAVAREA V, contributing to the nautical cartographic update of the area.
New technologies/equipment: a "small-independent" survey boat was acquired, so as to be used in fast surveys in restricted areas. New multibeam sonars were acquired (for the small survey boat and for the existing hydro/oceanographic ships).
New ships: a new riverine hydrographic ship was built in Brazil and commissioned in APR2015. A new hydrographic ship was acquired and commissioned in MAY2015. This Ship is being used in hydrographic commissions all through the Brazilian coast.
Problems encountered: X X X.

New charts & updates (MACHC region):
ENCs: X X X.
ENC distribution method: Brazilian ENCs are distributed by IC-ENC and PRIMAR.
RNCs: DHN provides raster navigational charts for the NAVAREA V. 438 RNC (40 in MACHC region) are currently available at no cost for the entire community.
INT Charts: the INT nautical charts scheme for MACHC region is ready since NOV2013. There were no new editions in 2015.
National paper charts (MACHC region): the first editions of the following nautical charts were published:
4029 – From Ilha da Maqueira to Itacoatiara;
4030 – From Ilha da Maqueira to Ponta Grossa;
4031 – From Ponta Grossa to Ilha das Onças;
4032 – From Ilha das Onças to Manaus; and
221 – Barra Norte do Rio Amazonas.
Other charts: X X X.
Problems encountered: X X X.

New publications & updates:
Updated publications: Tide Tables DG6 53th Edition (DEZ2015) and Nautical Almanac DN5 72th Edition (DEZ2015).
Means of delivery: paper and digital format accessible at DHN INTERNET website.
Problems encountered: X X X.

MSI
Existing infrastructure for transmission: Brazilian Navy Hydrographic Centre is responsible for the reception, processing and promulgation of MSI for NAVAREA V, on behalf of DHN, in accordance with GMDSS Master Plan. Navigational warnings and Meteorological Information are broadcasted by Safety NET service at scheduled times (0030 and 1230 UTC) twice a day. Meteorological information is broadcasted at scheduled times (0730 and 1930 UTC) twice a day. Bad weather warnings are forwarded any time, whenever it's necessary.
MSI is also broadcasted in VHF/HF by Rio de Janeiro Navy Radio Station, at least three times a day. Local navigational warnings are broadcasted by VHF/HF only.

SERVICE	YES	NO	PARTIAL	NOTES
LOCAL WARNINGS	X			
COASTAL WARNINGS	X			
NAVAREA WARNINGS	X			
INFORMATION ON PORTS AND HARBOURS	X			

GMDSS IMPLEMENTATION (IMO Publication 970 - GMDSS Handbook)

SERVICE	YES	NO	PARTIAL	NOTES
MASTER PLAN	X			
A1 AREA		X		
A2 AREA		X		
A3 AREA	X			
NAVTEX		X		
SafetyNET	X			

New infrastructure in accordance with GMDSS Master Plan: the implementation of a net for the transmission of NAVTEX is being discussed internally.
Problems encountered: X X X.

C-55
Status of **hydrographic survey** of all navigable waters, including internal waters, out to the limits of the EEZ (as stated in the last update, JUL2014):

Survey coverage, where:
A - Percentage which is adequately surveyed.
B - Percentage which requires re-survey at larger scale or to modern standards.
C - Percentage which has never been systematically surveyed

	A	B	C
Depths < 200m	70	30	0
Depths > 200m	90	10	0

The information listed above does not include navigable rivers as they are treated separately due to the individual nature of their dynamics, their wide navigable area and economic significance.

Status of hydrographic survey of Brazilian Navigable Rivers

Survey coverage, where:
A - Percentage which is adequately surveyed.
B - Percentage which requires re-survey at larger scale or to modern standards.
C - Percentage EEZ which has never been systematically surveyed.

	A	B	C
Depths < 200m	60	40	0
Depths > 200m	---	---	---

Status of **nautical charting** within the limits of the EEZ:

Coverage of charts published by your organization, where:

A - Percentage covered by INT series/paper chart series meeting the standards in S-4.

B - Percentage covered by Raster Navigational Charts (RNCs) meeting the standards in S-61.

C - Percentage covered by ENCs meeting the standards in S-57.

PURPOSE/SCALE	A	B	C
Offshore passage/Small	90	100	90
Landfall and Coastal passage/Medium	75	85	80
Approaches and Ports/Large	100	100	100
Percentage of Group A showing depths in metres	100		
Percentage of Group A referenced to a satellite datum	80		

Capacity Building
Training needed: X X X.

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

On August 2015 DHN (Brazil) hosted a three-week Hydrographic Survey Course, as a part of an effort to build hydrographic capacity also to civilian companies.

a) Projects under development: X X X

Oceanographic activities
General: deployment of XBTs by Brazilian Navy Ships at international waters and the operation and maintenance (annual) of eight PIRATA moored buoys by Brazilian Hydrographic Navy Ships.
Oceanographic cruises were done by the Brazilian Navy Hydrographic Ships on the north, east and south coasts of Brazil, using CTD, XBT and ADCP.
The Brazilian National Buoy Program counts on 7 operational buoys. Drifting buoys were also deployed along the Brazilian coast during the oceanographic cruises.
GEBCO/IBC's activities: routine GEBCO soundings are performed by the Brazilian Hydrographic Navy Ships employed during the all the commissions done.
Tide gauge network: 233 tide gauges are distributed by the Brazilian territory (SEP2015 data). 49 tide gauges are placed in MACHC region.
New equipment:
Problems encountered: X X X.

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, GEBCO-SCUNF, GEBCOTSCOM, IEHG,PAC-PRIMAR,IMO-NAV and IC-EN.
Meteorological data collection: meteorological data are collected through fixed meteorological stations placed all over Brazil, though ships and through internet links. All data are used for the Maritime Meteorological Service products, distributed and broadcasted at no cost all over Brazilian coast and by internet.
International: DHN and the Hydrographic Service of Uruguay (SOHMA) are developing the Uruguay-Brazil Waterway in Patos and Mirim Lagoons. When stated, this 1.400km waterway will help improving exportation of both countries, allowing Uruguay to use Rio Grande harbor (15m deep today).
Brazil and Suriname are discussing the implementation of a technical agreement between both countries in Hydrographic matters. The agreement is in Brazil Authorities for signature.
Brazil and Guyana started discussions for a technical agreement for cooperation in Hydrographic matters. The agreement is in Brazil Authorities for signature.

Conclusions
DHN-BR reassures its commitment with the MesoAmerican and Caribbean Sea Hydrographic Commission (MACHC) and plans continuous hydrographic activities so as to keep the nautical charts updated, as stated in regulations V and IX of the SOLAS Convention.