

**10th Hydrographic Commission on Antarctica (HCA) Meeting
British Antarctic Survey (BAS), Cambridge,
United Kingdom, 20-22 September 2010**

C-55 STATUS AND GIS FOR ANTARCTICA
Progress Report
IHB

1. C-55

The two pages of IHO Publication C-55, relating to Antarctica, have been updated by the IHB and are attached to this paper as Annex A. They need further updating, in particular on the status of MSI. Information on hydrographic surveys reflects their poor status.

2. GIS for Antarctica

A "GIS for Antarctica" is being developed at the IHB, which comprises various layers of meta-information pertaining to Hydrography, e.g. surveys, INT charts or ENC's. The GIS includes metadata and geographical coordinates. Development of this GIS is being made by a GIS specialist, kindly seconded to the IHB by Japan (JHOD).

The IHO GIS for Antarctica makes use of the freeware Mapserver and Mapscript. It will eventually comprise the following layers of information:

- ✓ Hydrographic Surveys :
 - Systematic surveys (areas defined by closed squares or polygons).
 - Soundings on passage (ships' tracks).
- ✓ INT Charts :
 - Agreed scheme
 - Charts published / not published / planned
- ✓ ENC's :
 - Agreed scheme for all usage bands
 - ENC's published / not published / planned
- ✓ RNC's :
 - RNC's produced or published.
- ✓ Geographical Names:
 - Undersea Feature Names (from GEBCO-SCUFN Gazetteer)
 - Other maritime names (from S-23)
 - Land Toponymy (from SCAR Composite Gazetteer on Antarctica)
- ✓ Tide Gauges / Water Measurement Stations
- ✓ Scientific Stations

The Antarctic GIS can be seen at <http://mail.ihb.mc:8880/HCA/>. User = monaco and password = applepolice.

3. Survey Metadata

Basic information (metadata) on the hydrographic surveys carried out in Antarctica is maintained at the IHB in an Excel file. The current version is on the IHO website (www.iho-ohi.net > Committees & WGs > HCA > Miscellaneous / IHO GIS for Antarctica). The file is divided in 3 parts: soundings along passage, systematic surveys in square areas, and systematic surveys in polygonal areas. HCA Member States are requested to make use of the sample Excel file, also provided on same web page, to provide survey metadata updates to the IHB.

C-55 UPDATE

1. ANTARCTIC PENINSULA

IHO C-55: Antarctic Peninsula

Updated

September 2010

INT Region: M

Status of Hydrographic Surveys

| | | | | | |
|-----------|-----------|-----------|-----------|-----------|-----------|
| A1 | A2 | B1 | B2 | C1 | C2 |
| 0 | 0 | 40 | 29 | 60 | 71 |

A1/A2= % which is adequately surveyed 0-200m/>200m
B1/B2= % requiring re-survey at larger scale or to modern standards 0-200/>200m
C1/C2= % which has never been systematically surveyed 0-200m/>200m

Comment

1. Along the E coast of Palmer Land water less than 200m in depth is ice-covered.
 2. Throughout the areas ice conditions preclude the effective deployment of sidescan-sonar. No large-scale MBES surveys, which are the only effective means of disproving dangers, have yet been completed. Large scale echo sounder coverage has been focused on the approaches to bases and to the main channels around the Antarctic Peninsula.

Status of Nautical Charting

A=% covered by INT Charts; **B=**% covered by Raster Navigational Charts (RNCs) ; **C=**% covered by ENC's

| Purpose / Scale | A | B | C |
|---------------------------------------|----|----|----|
| Offshore passage / Small | 60 | 80 | 60 |
| Landfall and Coastal passage / Medium | 60 | 80 | 20 |
| Approaches and Ports / Large | 60 | 80 | 10 |

Status of Maritime Safety Information

| Service | Status |
|------------------|--------|
| Local Warnings | |
| Coastal Warnings | |
| Navarea Warnings | |
| Port Information | |

GMDSS Implementation

| Service | Status |
|-------------|--------|
| Master Plan | |
| Area A1 | |
| Area A2 | |
| Area A3 | |
| NAVTEX | |
| SafetyNET | YES |

2. ANTARCTICA, EXCLUDING PENINSULA

IHO C-55 Antarctica, excluding Peninsula

Updated

September 2010

INT Region: M

Status of hydrographic survey

| | | | | | |
|-----------|-----------|-----------|-----------|-----------|-----------|
| A1 | A2 | B1 | B2 | C1 | C2 |
| 0 | 0 | 1 | 20 | 99 | 80 |

| |
|--|
| <p>A1/A2=% which is adequately surveyed 0-200m/>200m B1/B2=% requiring re-survey at larger scale or to modern standards 0-200/>200m C1/C2=% which has never been systematically surveyed 0-200m/>200m</p> |
| <p>Comment 1. Along the coasts of Dronning Maud Land and Byrd Land, and the Ronne, West, Shackleton, Ross and smaller ice sheets, water less than 200m in depth is ice-covered. 2. Throughout the areas ice conditions preclude the effective deployment of sidescan-sonar. The only large scale MBES surveys, which are the only effective means of disproving dangers, to have been completed, are those by New Zealand in the area of Cape Hallett to Cape Adare. Large scale echo sounder coverage has been focused on the approaches to bases.</p> |

Status of Nautical Charting

A=% covered by INT Charts; **B**=% covered by Raster Navigational Charts (RNCs) ; **C**= covered by ENC

| Purpose/Scale | A | B | C |
|-------------------------------------|----|----|----|
| Offshore passage/Small | 60 | 80 | 60 |
| Landfall and Coastal passage/Medium | 60 | 80 | 20 |
| Approaches and Ports/Large | 60 | 80 | 10 |

Status of Maritime Safety Information

| Service | Status |
|------------------|---------------|
| Local Warnings | |
| Coastal Warnings | |
| Navarea Warnings | |
| Port Information | |

GMDSS Implementation

| Service | Status |
|----------------|---------------|
| Master Plan | |
| A1 Area | |
| A2 Area | |
| A3 Area | |
| NAVTEX | |
| SafetyNET | YES |