

IHO Hydrographic Commission on Antarctica (HCA)
9th Meeting, Simon's Town, Cape Town, South Africa, 12-14 October 2009

S-55 STATUS AND GIS FOR ANTARCTICA

Progress Report

IHB

1. S-55

The two pages of IHO Publication S-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 will include various layers of meta-information pertaining to Hydrography, e.g. surveys, INT charts or ENCs. The GIS will include metadata and geographical coordinates. Development of this GIS has been delayed due to lack of staff resource available at the IHB. However, a GIS specialist has been kindly seconded to the IHB by Japan from October 2008 and he has been able to start working on the Antarctic GIS from August 2009. It is hoped that the task will be completed before HCA10.

The IHO GIS for Antarctica will make use of the freeware Mapserver and Mapscript. It will eventually provide at least 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
- ✓ ENCs :
 - Agreed scheme for all usage bands
 - ENCs published / not published / planned
- ✓ RNCs :
 - RNCs 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

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.

S-55 UPDATE

1. ANTARCTIC PENINSULA

IHO S-55: Antarctic Peninsula

Updated

September 2009

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

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 S-55 Antarctica, excluding Peninsula

Updated

September 2009

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