

**IHO Hydrographic Commission on Antarctica (HCA)
7th Meeting, Buenos Aires, Argentina, 3-5 October 2007**

FINAL MINUTES

- Notes: 1) A list of acronyms used in these Minutes is at Annex A.
2) A list of all actions from HCA-7 is at Annex E.
3) Names of persons are written in full the first time they appear in the Minutes. Afterwards, only the surname is shown.

1.- OPENING

Docs: HCA7-1A rev.2 List of Documents [also Annex C]
HCA7-1B rev.3 List of Participants [also Annex B]

The 7th Meeting of the Hydrographic Commission on Antarctica (HCA) took place at the *Centro Naval* in Buenos Aires, Argentina, on 3-5 October 2007. The meeting was organized and hosted by the *Servicio de Hidrografía Naval (SHN)* of Argentina. Twelve HCA Member States¹, out of 17, were represented at this meeting, plus observers from Peru, COMNAP, IAATO and SCAR. In total, 29 delegates were in attendance.

Participants were welcomed by RAdm Andres Roque DI VINCENZO, Director of SHN. He referred to the International Polar Year (IPY) in 2007-08 and stressed the need for international coordination and cooperation on hydrographic activities in Antarctica.

Opening Remarks were provided by Capt. Hugo GORZIGLIA, IHB Director and Chairman of HCA. He explained that HCA, one of the IHO subsidiary bodies, is dedicated to addressing hydrographic issues relating to Antarctic waters, and aims at improving the safety of navigation and the protection of the environment in Antarctica, while various activities are currently developing in this region, e.g. tourism. He noted the fruitful relationship with observer organizations, in particular ATCM, COMNAP, IAATO and SCAR. He reviewed briefly the ongoing and future tasks of HCA and stressed the need for involvement of all HCA Members in HCA work beyond attendance to meetings, e.g. in volunteering to be INT chart producers. He said that there was a need to adapt HCA statutes to the decision by the 17th International Hydrographic Conference to have two main committees only, with HCA being placed under the Inter Regional Coordinating Committee (IRCC); this issue would be addressed during HCA-7. He mentioned that an HCA seminar on hydrography in Antarctica will take place in the frame of the 31st ATCM in Kiev, Ukraine, in June 2008. He concluded in thanking SHN for the wonderful venue and the hard work in organizing this meeting.

The HCA Secretary, Ing. en chef Michel HUET (IHB), reviewed the documentation available to the meeting, noting that all documents were posted on the IHO website (www.iho.int > Reg Hydro Comm > HCA).

2.- HCA MEMBERSHIP STATUS

Docs: HCA7-2A HCA Membership and Observers List
HCA7-INF2 Current HCA Statutes

The Chair, noting that USA have signed the statutes during 2007, observed that 18 IHO Member States have to date signed the HCA statutes which were agreed at the 3rd HCA Meeting (Monaco, September 2003) and, therefore, qualify as HCA members. Those states are Argentina, Australia, Brazil, Chile, China, Ecuador, France, Germany, Greece, India, Italy, New Zealand, Norway, Russia, South Africa, Spain, United Kingdom and USA. He further noted that the following 6 IHO Member States were still pending confirmation membership: Japan, Rep. of Korea, Peru, Poland, Ukraine and Uruguay. LtCdr. Luis HERNANDEZ Rubin, Peru, read a letter from the Hydrographer of Peru, indicating that the *Dirección de Hidrografía y Navegación* was prepared to sign the HCA statutes for Peru. This would be done by correspondence.

¹ Argentina, Australia, Brazil, Chile, Ecuador, France, Germany, India, Italy, Norway, UK and USA. In addition, a representative from Greece attended the last day meeting.

It was agreed that the HCA Chair would again raise the issue of HCA Membership in the covering IHB Circular Letter sending HCA-7 minutes to Member States.

Outcome:

- **Action 7/1 - HCA Chair** to invite those MS that are signatories of the Antarctic Treaty, but are not yet HCA members, to consider HCA membership. (In the covering IHO Circular Letter distributing the Minutes of the 7th HCA Meeting).
- **Action 7/2 - On receipt of Peru' signature of HCA Statutes, IHB** to update the HCA page of the IHO website, including the HCA Statutes.

3.- APPROVAL OF THE AGENDA

*Docs: HCA7-3A rev.1 Agenda [also Annex D]
HCA7-3B Annotated Agenda
HCA7-3C rev.1 Timetable*

The draft agenda was approved without changes. Regarding the timetable the Chair suggested, and this was agreed, that two sub-groups be formed to meet at the end of the first day to address the following issues:

- HCA in the new IHO structure: changes required in the HCA statutes and IHO regulations.
- HCA seminar on hydrography in Antarctica during the 31st meeting of ATCM in June 2008.

Outcome:

- The Commission approved the agenda (see Annex D).

4.- ELECTION OF VICE-CHAIRMAN

The current HCA Vice Chairman, Capt. Rod NAIRN (Australia) kindly volunteered to continue for another term; he was re-elected by acclamations.

Outcome:

- Capt. Rod NAIRN (Australia) was elected unopposed as Vice-Chairman of HCA.

5.- STATUS OF LIST OF ACTIONS RESULTING FROM THE 6TH HCA MEETING

*Docs: HCA7-5 A rev.1 Status of Actions List from the 6th HCA Meeting
HCA7-INF3 Minutes of the 6th HCA Meeting, Punta Arenas, Chile, 2006
HCA7-INF4 IHO Report submitted to the 30th ATCM*

The Chair and the Secretary reviewed all actions arising from HCA-6. Most of the actions had been completed and the pending ones were being addressed by this meeting under various agenda items. Particular comments were made as follows (Action nos. are those in Doc. HCA7-5A rev.1):

- Action 6/2: Application of SOLAS Convention, Chapter V, Regulation 9, in Antarctic waters. The Chair reported that IMO has been consulted and replied that Reg. 9 was written by IHO, and that it was therefore IHO business to interpret this rule. The Chair felt however that it was beyond HCA mandate to interpret Reg. 9. Australia's view (NAIRN) was that it was a collective responsibility of HCA members to implement Reg. 9, i.e. to provide hydrographic services for Antarctic waters. UK (RAdm Ian MONCRIEFF) indicated that they would make proposals to IMO on this matter. The Chair suggested that a paper on this issue be prepared for presentation to the 31st ATCM, which was agreed.

- Action 6/4: Representation of HCA to IBCSO. The Chair reported that the Russian HO (DNO) has proposed Capt. FOMIN to represent HCA matters within IBCSO. It was remarked that Capt. FOMIN should attend HCA meetings in order to be aware of HCA matters. HCA Chair suggested providing him with appropriate guidance on how to best represent HCA at IBCSO meetings, and also writing to DNO Director regarding Capt. FOMIN's participation in HCA meetings, which was agreed.
- Action 6/5: IPY coordinating committee. There had been no feed-back from this committee, following submission to them of the proposed short list of surveys in Antarctica. UK (MONCRIEFF) offered to approach the two co-chairs of this committee, with a view to obtaining a response.
- Action 6/6: Proposed amendments to the HCA statutes. Australia (NAIRN) presented two options for amending the HCA statutes to comply with the new IHO structure:
 1. HCA Chairperson from a Member State and supported by IHO Secretariat.
 2. HCA Chairperson from IHO Secretariat.

The Chair asked HCA Members present to vote for one of the above options. All HCA Members, except Norway, voted for Option 2, which was therefore approved. It was agreed that HCA Chair would circulate Option 2 of the proposed amendments to the HCA Statutes (see Annex F), to all HCA Members.

Australia (NAIRN) then drew attention to the fact that while the HCA has similar characteristics to an RHC, it cannot operate under Article 8 of the revised IHO General Regulations because no coastal States exist within the region. Similarly it cannot operate as a Sub-Committee under Article 6 as membership is not open to all IHO Member States. Membership of HCA requires certain and particular qualifications to be met. These are that while members must be IHO Member States, they must also have acceded to the Antarctic Treaty and are contributing resources and/or data to IHO INT Chart coverage of Region M.

After lengthy discussion on the pros and cons of how best to use / adjust Articles 6 and/or 8 of the revised IHO General Regulations to accommodate the particular case of HCA, UK (MONCRIEFF) proposed the following revised wording for Article 8(e):

"Full membership is reserved for Member States within the region. In the unique case of the Antarctic region, membership of the Hydrographic Commission on Antarctica (HCA) is reserved to Member States whose governments have acceded to the Antarctic Treaty and contribute resources and/or data to IHO INT Chart coverage of Region M."

The Chair put this proposal to a vote and all HCA Members present, except France and Norway who abstained, voted in favour of the proposal, which was therefore agreed. It was decided that HCA Chair would submit the above proposed amendments to Article 8(e), to the IHB Directing Committee for further action.

- Action 6/7: HCA performance indicators. The merit of using the HCA performance indicators, as described in the table at Annex F to the HCA-6 minutes was discussed. It was agreed that the IHB would use and populate this table for presentation to the HCA-8 in 2008.
- Action 6/8: Support to HCA activities at ATCM. HCA Chair reported that only UK expressed support to HCA work at ATCM meetings. UK (MONCRIEFF) mentioned that they have close links with the British Antarctic Survey (BAS) on Antarctic matters. It was agreed that support to HCA work at ATCM should remain an ongoing task for HCA Members.
- Action 6/11: COMNAP information paper to the 30th ATCM. COMNAP (RAdm. Manuel CATALAN) reported that this paper entitled "International Coordination of Hydrography in Antarctica: Significance to Safety of Antarctic Ship Operations" and which was prepared with the valuable

support of the HCA Chair and Capt. Mike BARRITT (UK), was presented to the 30th ATCM as Information Paper No. 50 (see Doc. HCA7-INF5) and was very well received by the meeting. The Commission took this opportunity to express its gratefulness to Capt. BARRITT for his outstanding past contribution to the HCA work.

- Action 6/12: INT charts in progress or not produced. The Secretary reported that volunteering producer nations were still needed for 8 charts in the scheme. These included the 3 charts which had formerly USA as producer and, as USA now have full HCA membership, they were invited to re-consider being producer for those charts, i.e. INT charts 909, 9062 and 9105.
- Action 6/15: List of layers for the HCA GIS. The Secretary informed that a draft list of GIS layers was proposed in Doc. HCA7-07.5B; this matter would be further discussed under agenda item 7.5. SCAR (Dr Henk BROLSMA) expressed an interest in cooperating with HCA on this topic, which was agreed (see Action 7/20).
- Action 6/21: Paper on HCA MS' surveying plans and charting expectations for IPY 2007/08. The intention was that the HCA Survey Programme WG (HSPWG) would produce a document highlighting the surveying plans and charting expectations of the HCA Member States for 2007/08, for submission to the IPY coordination committee after approval by HCA. However, no information was received at the IHB on this matter and, as time is flying and that the IPY is already there, HCA Chair suggested that this action be cancelled, which was agreed.

Action 6/22: Paper on the need for accurate charting and modern survey coverage. The intention was that the HSPWG would prepare an in-depth paper with supporting facts and statistics stressing the need for accurate charting and modern survey coverage to ensure reliable and confident navigation for existing and future vessel movements. However, no information was received at the IHB on this matter and HCA Chair suggested that this action be cancelled, which was agreed.

As a general note, HCA Chair stressed the need for those involved in actions decided at HCA meetings, to actually endeavour to have those actions completed.

Outcome:

- **Action 7/3 - HCA Chair** to prepare a document on SOLAS V Reg. 9 (requiring contracting governments to arrange for the provision of hydrographic services) for presentation at the 31st ATCM.
- **Action 7/4 – HCA Chair** to provide Capt. Fomin, DNO, Russia, with guidance on how to represent HCA matters within the IBCSO Editorial Board. **HCA Chair** to write a letter to the Director of DNO, asking for Capt. Fomin's participation in HCA meetings.
- **Action 7/5 – UK** to approach the two co-chairs of the IPY Coordinating Committee, with a view to obtaining a response / feedback following the submission to them of the short list of surveys.
- **Action 7/6 – HCA Chair** to circulate the proposed amendments to the HCA Statutes, as agreed at HCA-7 (option 2 – Chairman from IHO Secretariat), to all HCA Members. **IHB** to annex the option 2 document to the minutes of HCA-7.
- **Action 7/7 – HCA Chair** to submit the proposed amendments to Article 8(e) of the IHO General Regulations, as agreed at HCA-7, to the IHB Directing Committee for further action. Revised Article 8(e) to read:

“Full membership is reserved for Member States within the region. In the unique case of the Antarctic region, membership of the Hydrographic Commission on Antarctica (HCA) is reserved to Member States whose governments have acceded to the Antarctic Treaty and contribute resources and/or data to IHO INT Chart coverage of Region M.”
- **Action 7/8 – IHB** to use and populate the draft HCA Performance Indicators Table (Annex F to Minutes of HCA-6), for presentation to the 8th HCA meeting.
- **Action 7/9 – HCA Members** to brief their national delegations to ATCM on HCA activities and the importance of hydrography in Antarctica, in order to assign higher priority to hydrography in their national programmes.

6.- RELEVANT INTERNATIONAL ORGANIZATIONS' REPORT

6.1 Antarctic Treaty Secretariat (ATS) (www.ats.aq)

Docs: HCA7-6.1A ATCM Report (including outcomes from the 30th ATCM)
HCA7-INF4 IHO Report to the 30th ATCM, New Delhi, India, 2007

The ATS Executive Secretary (Mr. Jan HUBER) briefly reported on hydrography-related matters which were discussed at the 30th ATCM, New Delhi, India, from 30 April to 11 May 2007. He referred to the COMNAP paper on the international coordination of hydrography in Antarctica aimed at safety of Antarctic ship operations (Doc. HCA7-INF5) and to the IHO report on cooperation in hydrographic surveying and charting of Antarctic waters (Doc. HCA7-INF4), the latter report including a proposal for an IHO/HCA seminar to be organised during the 31st ATCM to raise awareness on the importance of hydrographic activities in the Antarctic. He said that these presentations were very well received by the meeting.

On the subject of Safety and Operations in Antarctica, ATS (HUBER) mentioned the grounding of the cruise vessel *M/S Nordkapp* which occurred on 30 January 2007 during passage of Neptune's Bellows, Deception Island, due to a human error (faulty navigation), and which resulted in spill of marine diesel oil. He also referred to a paper by New Zealand noting the significant proportion of tourist vessels operating in the Antarctic Treaty area that are not flagged to Antarctic Treaty Parties and identifying some challenges that could arise from such vessels that are not obliged to adhere to ATCM protocols, rules and conventions. Some of these non-Party vessels reportedly intended to land up to 1200 passengers in Antarctica, which was of significant concern to ATCM.

He mentioned that the 31st ATCM will be held in Kiev, Ukraine, from 2 to 13 June 2008.

Outcome:

- The Commission noted the report.

6.2 Council Of Managers of National Antarctic Programs (COMNAP) (www.comnap.aq)

Docs: HCA7-6.2A COMNAP Report
HCA7-INF5 *International Coordination of Hydrography in Antarctica: Significance to Safety of Antarctic Ship Operations – Paper submitted by COMNAP to the 30th ATCM.*

The Executive Secretary of COMNAP (Mr. Antoine GUICHARD) and the Chairman of COMNAP Ship Operations Working Group (CATALAN) briefly reported on COMNAP and SHIPOPS activities of interest to HCA. They mentioned that the paper on the importance of hydrography in Antarctica (Doc. HCA7-INF5), prepared in close cooperation with HCA and which was presented to the 30th ATCM, highlighted that:

- a large proportion of Antarctic waters still remain to be adequately surveyed to meet the needs of contemporary shipping entering Antarctic waters;
- whilst there have been relatively few accidents in the region, there is an increase in the number and size of vessels deploying into the region and pushing into seas where hydrographic surveys and charting are inadequate to support their safe operation;
- there is a need for more, and better coordinated, hydrographic and charting work in the Antarctic region;
- hydrographic activity is expensive and assets are scarce;
- coordination of international effort is of the utmost importance;
- there is an urgent need to uphold, and where necessary clarify, responsibilities of both government and private sector operators.

They noted that, although this paper was well received by the Meeting, it did not attract many questions and did not generate any substantial discussions.

They reiterated that COMNAP would continue to maintain a productive relationship with HCA, by contributing to its work and identifying the ways by which COMNAP National Programs can further support the HCA work. They suggested this could be achieved through:

- Cooperation by ships of opportunity.
- Stressing the importance for all ATS members of the work of HCA and the need to support it.
- Stressing to COMNAP National Programs that a successful HCA improved cooperation will mean safer navigation, protection of life at sea and reduced risks of marine pollution.
- Encouraging in COMNAP meetings those nations active in the Antarctic and that are still not members of HCA, to consider joining HCA and/or contributing to its work.
- Informing about HCA activities in COMNAP publications, web pages and Antarctic map.
- Considering the organization of a special session on hydrography at the occasion of COMNAP annual meetings.

HCA Chair thanked the COMNAP and SHIPOPS representatives for their continuous and efficient support.

Outcome:

- The Commission noted the report.

6.3 International Maritime Organization (IMO) (www.imo.org)

There was no IMO representative at, nor IMO report to the meeting.

6.4 International Association of Antarctica Tour Operators (IAATO) (www.iaato.org)

Docs: HCA7-INF6 Report of IAATO 2006-2007
HCA7-INF7 IAATO Overview of Antarctic Tourism 2006-2007

The IAATO representative, Mr. Paul BEGGS, reported briefly on the Association's activities. IAATO counts 80 Members and its ships and aircrafts are mainly involved in tourism and commercial expeditions in Antarctica. He noted that some 25,000 visitors landed from passenger vessels, mainly in the region of the Antarctic Peninsula. He reminded that IAATO stands ready to provide support to IHO/HCA through ships of opportunity.

Outcome:

- The Commission noted the report.

6.5 Scientific Committee on Antarctic Research (SCAR) (www.scar.org)

Docs: HCA7-6.6A SCAR Report

Dr. Henk BROLSMA, Chairman of the SCAR Standing Committee on Antarctic Geographic Information (SC-AGI), gave a presentation on this committee's activities. SC-AGI is responsible for several initiatives, including:

- Antarctic Digital Database (ADD): a compilation of scale of capture and generalized topographic data for the continent of Antarctica.
- Composite Gazetteer of Antarctica (CGA): a compilation of all existing Antarctic place-names from national gazetteers and the GEBCO Gazetteer of undersea feature names. Currently the SCAR CGA holds more than 35 000 entries. It is managed by the Italian Antarctic Programme.

- Map Catalogue: a catalogue of Antarctic region maps produced by SCAR member countries.
- King George Island GIS: an integrated geographic database for use by all countries and in multi-disciplinary applications.

He expressed much interest in cooperating with HCA on GIS issues (see also Section 7.5). He also mentioned that SCAR was maintaining a number of tide gauges around Antarctica and suggested that the resulting tide information could be useful to HCA, which was noted as well as the potential for cooperation and the need to avoid duplication of work/data.

Outcome:

- The Commission noted the report.

6.6 Intergovernmental Oceanographic Commission (IOC) (<http://ioc.unesco.org>)

The IOC representative, Dr. Dmitri TRAVIN, provided a verbal report. He reported that IOC support to ocean mapping activities in Antarctica was limited to the IBCSO project, due to UNESCO financial restrictions. He urged HCA members to contribute bathymetric data to IBCSO.

Outcome:

- The Commission noted the report.

In conclusion of this agenda item, HCA Chair thanked all speakers and welcomed continuing cooperation with observer organizations.

7.- HCA ACTIVITIES IN THE LIGHT OF THE IHO WORK PROGRAM

7.1 INT chart scheme: progress made since last meeting and actual charting status; new requirements and modifications proposed to the scheme (M-11).

<i>Docs:</i>	<i>HCA7-7.1A rev.1</i>	<i>INT Chart Scheme and Production Status for Region 'M'</i>
	<i>HCA7-7.1B</i>	<i>INT Charts in Progress or Not Produced</i>
	<i>HCA7-7.1C rev.1</i>	<i>Layout of INT Production Status for Region 'M'</i>

IHB (HUET) reported on progress made on INT chart scheme and production in Region M. Out of the 98 charts which form the scheme, 56 had been published as of September 2007, i.e. 2 additional charts over the past year. He noted that 10 further INT Charts (NC or NE) were planned for publication in 2007 – 2009.

The Commission then reviewed Doc. HCA7-7.1B, focusing on those INT charts for which the IHB had no information regarding their current status. The review results are summarized in the table below:

INT No.	Producer	Scale 1:	Comments
9045	JP	500 000	There was no JHOD representative at HCA-7. HCA Chair would contact JHOD, asking for their intentions on these charts.
9046	JP	100 000	
9047	JP	10 000	
9000	IT	500 000	Italy (LtCdr. Enrico ANTONINO) reported that IIM has requested data to DNO, Russia, for the relevant area; should that data be received in time, INT 9000 could possibly be published in 2008.
908	GB	2 000 000	UK (Mr. Tim SEWELL) said there was no production plan for these charts for the time being.
9107	GB	50 000	

9171	GB	500 000	Formerly with US as producer. Subsequently, USA indicated they could not produce those charts. As USA is now a full HCA member since 2007, it was agreed to ask USA to re-consider their position.
9112	GB	various	
909	??	2 000 000	
9062	??	200 000	
9105	??	25 000	
905	DE	2 000 000	Germany (Dr. Hans Werner SCHENKE) said that no decision had been taken regarding the production of this chart. HCA Chair would contact BSH, asking for their intentions.
9140	AR	150 000	Argentina (LtCdr. Viviana N. BELTRÁN) reported that survey of the relevant area was in progress and would be completed by 2010; compilation of this chart will follow.
9111	AR	25 000	Argentina (BELTRÁN) said that publication of this chart is planned for 2012.
9100	AR	25 000	Argentina (BELTRÁN) said that there was no production plan for this chart for the time being.
9101	AR	10 000	Argentina (BELTRÁN) said that publication of this chart is planned for 2013.
9115	AR	50 000	Argentina (BELTRÁN) reported that 40 % of the survey for this chart has been completed. Its publication is planned for 2012.
9103	CL	50 000	Chile (LtCdr. Enrique SILVA) said there was no production plan for these charts for the time being.
9104	CL	50 000	
9108	CL	50 000	
9110	CL	30 000	
9157	CL	150 000	
9161	CL	150 000	
9151	CL	200 000	
9152	CL	200 000	Chile (SILVA) said that publication of these charts is planned for 2012, in cooperation with Brazil.
9162	CL	150 000	Chile (SILVA) said that compilation of these charts would be completed by 2010. It was noted that that Russia (DNO) has offered to produce INT 9162.
9164	CL	150 000	
9131	GB ?	75 000	These new charts in the scheme had tentatively been allocated to UK at HCA-6. UK would confirm their intentions regarding the production of these charts.
9132	GB ?	75 000	
9116	GB ?	various	
9130	GB ?	75 000	
9114	??	various	This new chart in the scheme has currently no allocated producer. HCA Chair / IHB would identify available data for the relevant area and approach potential producer(s) for this chart.
9125	BR-PE	40 000	Brazil (Capt. Carlos ALBUQUERQUE) reported on discussions between Brazil and Peru regarding the production of this chart. Its publication is planned for 2010.

During this review, it was confirmed that all charts marked "Proj. 2007" in Doc. HCA7-7.1B had actually been, or were about to be published, i.e. 9037 (Australia), 9156 (Argentina) and 9123 & 9124 (Chile).

It was agreed that an updated version of Doc. HCA7-7.1B, i.e. showing all INT charts in progress or not produced, would be prepared by the IHB and annexed to the minutes of HCA-7 (see Annex G).

Brazil (VAdm. Edison LAWRENCE Mariath Dantas) proposed the inclusion of two new INT charts in the scheme, based on Brazilian charts 25119 and 25120, in the area of Elephant Island (Doc. HCA7-7.5Ac refers). It was agreed that the IHB would prepare a proposal accordingly for circulation to all HCA members.

Outcome:

- The Commission noted the reports.
- **Action 7/10 - IHB** to update the document showing Charts in Progress or not Produced (Doc. HCA7-7.1B), to be annexed to minutes of the 7th HCA meeting. **HCA Chair** to invite all concerned MS, on a case by case basis, to provide information on their chart production plans. **HCA Chair** to identify available data and seek volunteering producer nations for those INT charts with no producer yet assigned.
- **Action 7/11 – USA** to re-consider their involvement regarding the production of INT charts 909, 9062 and 9105, now that they have full HCA membership.
- **Action 7/12 – IHB** to circulate Brazil’s proposal to include two additional charts in the INT Chart Scheme for Region M, as described in Brazil national report to the 7th HCA Meeting, to HCA Members for comments / approval.

7.2 ENC scheme and production status

Doc: HCA7-7.2A *ENC Production Status in Antarctica*
HCA7-7.2B *ENC Scheme for Small-Scales in Antarctica*
HCA7-7.2C *ENC Scheme for Medium-Scales in Antarctica*

IHB (HUET) presented the ENC production status for Region M (Doc. HCA7-7.2A), as summarized below.

- ✓ Chile has produced 2 “harbour” ENCs based on INT 9102 (CL5MA890) and 9155 (CL5MA800), not yet on the market. Chile (SILVA) indicated they were being quality controlled and would be available for distribution from February 2008.
- ✓ UK has published 3 “overview” ENCs based on INT 24 (GB104024), INT 64 (GB104064) and INT 75 (GB104075). In addition 8 ENCs are under preparation, based on INT 907 (GB104907), INT 9106 (GB47211A), INT 9109 (GB472010), INT 9153 (GB372220), INT 9154 (GB372210) and INT 9158 (GB57211A), and on national charts BA 3580 (GB372010) and BA 4063 (GB104063). UK (SEWELL) indicated that the latter ENC would be available in end 2007 and all others were planned for release by end of 2008.
- ✓ France plans to publish 3 ENCs in 2007-08, based on INT 9016 and INT 9017. France (Ing. Principal Serge ALLAIN) clarified that the ENC based on INT 9017 would be released in end 2007 while that based on INT 9016 was planned for publication in 2008.

Italy (ANTONINO) indicated that two ENCs, based on INT 9004 and 9005, were under construction at IIM and should be released in November 2007. Brazil (LAWRENCE) informed that DHN plans to produce two ENCs based on INT 9150 and 9125, which should be released in 2011. Norway (BREIVIK) said that NHS plans to publish an ENC based on INT 904 in 2008. Australia (NAIRN) informed that all INT charts in Region M under Australia’s responsibility would have their counterpart ENCs published before end 2010.

It was agreed that an updated version of Doc. HCA7-7.2A, i.e. showing the ENC production plan in Region M, would be prepared by the IHB and annexed to the minutes of HCA-7 (see Annex H).

IHB (HUET) referred to the small scale ENC scheme for Region M in Doc. HCA7-7.2B. HCA Letter 1/2007 proposed to HCA members a draft ENC scheme for small scales in Antarctica, for navigational purposes 1 (overview) and 2 (general), in accordance with Action no. 5 from HCA-6. No objection was received and no change was suggested, while support was expressed by France, Norway and Spain. The small scale ENC scheme, as in Doc. HCA7-7.2B, is therefore approved, including that the ENC

producer HO will normally be that of the INT chart on which the ENC has been based. The scheme has been posted on the IHO website (HCA page) and it was agreed that HCA members should follow this scheme when considering producing a small scale ENC.

IHB (HUET) presented an initial draft of a medium scale ENC scheme (Navigational Purpose 3: Coastal Navigation), prepared at the IHB and contained in Doc. HCA7-7.2C. This proposed scheme has been based on the agreed INT chart scheme at scales 1: 100K to 1: 300K. The draft scheme was briefly considered by the meeting. It was agreed that it would be refined by the IHB, as necessary, and then circulated to HCA members for consideration and approval.

The Commission also agreed there was a need to develop a large scale ENC scheme (Navigational Purposes 4, 5 and 6: harbour navigation and approaches), in support of ENC production by HCA members. The IHB was tasked to prepare a draft large scale ENC scheme, for distribution to HCA members for comments.

Outcome:

- The Commission noted the reports.
- **Action 7/13 - IHB** to refine the draft ENC scheme for medium scales (navigational purpose 3), as shown in Doc. HCA7-7.2B, and circulate it to HCA Members for comments / approval.
- **Action 7/14 – IHB** to develop a draft ENC scheme for large scales (navigational purposes 4, 5 and 6) and circulate it to HCA Members for comments / approval.
- **Action 7/15 – IHB** to update the ENC production plan (Doc. HCA7-7.2A) from the information gathered at, and in national reports to the 7th HCA Meeting. **IHB** to annex it to the minutes of this meeting (see Annex H).

7.3 Bilateral and Regional cooperation agreements, projects and capacity building initiatives in progress.

No report on these issues was available. No comments were expressed.

7.4 Interaction with IOC

Docs: HCA7-7.4A *GEBCO Report*
HCA7-7.4B *Undersea Feature Naming Status for Region 'M' (IHB)*
HCA7-7.4C *IBCSO Report*

A. The IOC-IHO GEBCO Project

Dr. SCHENKE, member of the GEBCO Guiding Committee, briefly reported on GEBCO activities over the past year. He referred to the 20th meeting of the GEBCO Sub-Committee on Undersea Feature Names (SCUFN) in July 2007 in Monaco, and to the 23rd meeting of the GEBCO Technical Sub-Committee on Ocean Mapping (TSCOM) in Palisades, NY, USA, in September 2007. He noted in particular that SCUFN had agreed revised ToR / RoP for the sub-committee and that an Open Bathymetric Science Day was included in the program of TSCOM-23. The annual Meeting of the GEBCO Guiding Committee would take place at the IOC Secretariat in Paris on 7-8 November 2007.

He mentioned that a GEBCO World Map has been produced by a team of GEBCO-members, supported by GEBCO-students from the Nippon Foundation / GEBCO training course; and that a digital copy was available from the GEBCO web site: <http://www.ngdc.noaa.gov/mgg/gebco/gebcoworldmap.html>. He noted that issues currently generating interest within GEBCO included:

- ✓ Status of the GEBCO Digital Atlas (GDA).
- ✓ Bathymetric data holdings and availability.
- ✓ New bathymetric charts and other products.
- ✓ Shallow water and coastal bathymetry.
- ✓ Nippon-Foundation/GEBCO Training Programme.

- ✓ Revision of the ToR / RoP for the GEBCO Guiding Committee, SCUFN and TSCOM.

IHB (HUET) briefly presented the current list of undersea feature names in Antarctica, as in Doc. HCA7-7.4B. There were some 190 names in the list. He noted that the following new names, most of them located in the Ross Sea area, were accepted by SCUFN at its 20th meeting in July 2007: Adare Basin, Davey Bank, Central Basin and Palmer Basin. On request from SCAR (BROLSMA), it was agreed that IHO-IOC publication B-6 would be made available to SC-AGI. SCAR (BROLSMA) further indicated that SC-AGI may provide HCA with a submission regarding those undersea feature names which are part of the SCAR Composite Gazetteer on Antarctica, but are not included in the GEBCO Gazetteer.

B. The IBCSO Project, an IOC-IHO-SCAR Project

Dr. SCHENKE, Chairman of IBCSO, gave a presentation on this project. The 1st business meeting of IBCSO took place in Santa Barbara, USA, in 1 September 2007. Matters discussed included collecting topographic data, geophysical data, global data sets and echo-sounding data, and establishing a metadata infrastructure. An IBCSO Editorial Board comprising 15 members has been formed, including Capt. FOMIN (DNO, Russia) who represents HCA. A geoscientific expert in digital data processing and GIS techniques (Dr. Norbert OTT), has been recruited by AWI in a full-time postdoctoral position to serve as IBCSO scientific editor. An IBCSO website has been set up (www.ibcso.org).

Dr. SCHENKE noted that the most critical point in the early stages of IBCSO will be the compilation of bathymetric data from a great number of organisations and other sources. He indicated that hydrographic offices, organisations, universities, agencies, and research institutions that are in possession of single and multibeam bathymetric data in the IBCSO area, will soon be approached and invited to supply data for the preparation of IBCSO. Once the data is registered to a consistent gridded mosaic, data modelling and optimisation will be applied by use of filtering and other GIS techniques. Additionally, meta-data will be stored in a bathymetry meta-database established at AWI. The integration of bathymetric data together with other data from satellite altimetry and topography will result in printed maps as well as digital web maps for use in GEBCO and other projects.

Dr. SCHENKE noted that, while IBCSO is receiving strong and encouraging support from SCAR and IHO/HCA, IOC support was not at the expected level. It was agreed that HCA Chair would contact IOC on the matter.

Outcome:

- The Commission noted the reports and reiterated its full support of the IBCSO project.
- **Action 7/16** – IHB to provide SCAR/SC-AGI with GEBCO Guidelines on Undersea feature naming (IHO-IOC Publication B-6).
- **Action 7/17** – HCA Chair to invite the IOC Executive Secretary to provide further support to the IBCSO project, which the HCA recognizes and strongly values the importance.

7.5 **Hydrographic surveying, nautical charting, nautical publications and information status.**

Docs: HCA7-7.5A *National Reports*
 HCA7-7.5B *S-55 Status – Progress Report*

A. Presentation of National Reports. Experiences with new techniques and equipment. Project proposals to speed-up compilation and production.

The following HCA members briefly presented their national reports: Argentina, Australia, Brazil, Chile, Ecuador, France, Germany, India, Italy, Norway, Peru, South Africa, UK and USA. The following particulars were noted (see national reports for more details):

- i. Argentina (Cdr. Jorge Cesar LAPENTA) - During the last cruise when sailing back to Buenos Aires, the icebreaker "Ara Almirante Irizar" set on fire. As a result, the ship

- will be under repair and therefore unavailable for a significant period of time, thus delaying the Argentinean survey programme in Antarctica.
- ii. Brazil (LAWRENCE) – Brazil has proposed to include two new INT charts in the scheme. See Section 7.1, Action 7/12.
 - iii. Chile (Capt. Jorge IBARRA Rodríguez) – A National Committee for Antarctic Geographic Toponomy has been created (National Decree 361 of 6 November 2006), to advise the Foreign Affairs Ministry on topics related to the Antarctic Toponomy. Its Chairman is the Director of SHOA. It was considered that this document could be useful to other HCA members. Chile (IBARRA) agreed to send it to the IHB, for circulation to HCA members.
 - iv. France (ALLAIN) - Since the 11 May 2007 SHOM, whilst keeping its name, has become an *Établissement Public*, i.e. a national establishment endowed with a legal personality independent from the French Government. The new decree defines SHOM's missions and responsibilities which embrace all areas placed under French jurisdiction or where France has international commitments such as Antarctica.
 - v. Germany (SCHENKE) – Charts INT 9055 and 9057 are under preparation through a joint AWI-BSH project, using CARIS software and the latest available coastline, and are planned for publication in end 2008.
 - vi. UK (SEWELL) - UKHO continues to work towards a fully digital production flowline to replace the existing analogue and digital system. Known as the Production Systems Programme (PSP), the project is designed to build the production foundation for the future. To date, the UKHO's working archive has been catalogued and documents captured in digital format, and geo-referenced. Receipt and distribution of source data documents in digital format is now being implemented, managed by workflow software. UK (SEWELL) also referred to the UKHO points of contact at the end of Doc. HCA7-7.5Ap.

The Chair mentioned that a national report had also been provided by Japan, not represented at the meeting.

Outcome:

- The Commission noted the reports.
- **Action 7/18** - On receipt of Chile's National Decree 361 creating a National Committee for Antarctic Geographic Toponomy, **IHB** to circulate this document to HCA Members and Observers for information.

B. Hydrographic Survey status (S-55) and HCA GIS

Referring to Doc. HCA7-7.5B and the two pages relating to Antarctica which appear on the IHO website (www.iho.org > Publications > Interactive Pubs > S-55), IHB (HUET) noted that they need updating as no information is provided on the status of charting and MSI. Also, information on hydrographic surveys reflects their poor status. The Commission tasked the IHB to update the Antarctica section of S-55 on the IHO website from the information available at the IHB on hydrographic surveying and nautical charting in Antarctica.

Development of a GIS for Antarctica

IHB (HUET) demonstrated a prototype "GIS for Antarctica" which is under development at the IHB. It will include various layers of meta-information pertaining to Hydrography, e.g. surveys, INT charts or ENCs. The GIS is being populated from geometry (geographical coordinates) and metadata. [Current status of the GIS](#) is shown on the IHO website (www.iho.org > Publications > Interactive Pubs > Antarctic Online Catalogue).

He indicated the intention is that the GIS for Antarctica will eventually provide at least the following information:

- ✓ Hydrographic Surveys :
 - Systematic surveys (areas defined by closed squares or polygons).
 - Soundings on passage (ships' tracks).
- ✓ INT Charts :
 - Agreed scheme.
 - Charts produced / published.
 - Charts in preparation / planned.
- ✓ ENCs :
 - Agreed scheme.
 - ENCs produced and available on the market.
 - ENCs produced but not yet available.
 - ENCs in preparation / planned.
- ✓ RNCs :
 - RNCs produced / published.

Basic information on hydrographic surveys is maintained at the IHB in an Excel file / spreadsheet. The [current version of this file](#) is on the IHO website (www.iho.org > Reg Hyd Comm > HCA > Miscellaneous > GIS for Antarctica). The file is divided in 3 parts: soundings along passage, systematic surveys in square areas, and systematic surveys in polygonal areas. It was agreed that HCA members would make use of the [sample Excel file](#), also provided on same web page, to provide survey metadata updates to the IHB.

The Commission agreed that this GIS will be a very valuable tool for planning purpose and reporting on progress made. It was suggested and agreed that the above list of potential layers of information provided in the GIS should be circulated to HCA members and observers for comments / improvements. SCAR (BROLSMA) expressed interest in cooperating with HCA on building the GIS for Antarctica, which was supported.

Outcome:

- The Commission noted the report.
- **Action 7/19 – HCA Members** to make use of the spreadsheet on hydrographic survey metadata (HCA_Surveys.xls), available from the IHO website, to provide survey updates to the IHB in view of populating the HCA Geographic Information System.
- **Action 7/20 - SCAR/SC-AGI and IHB** to cooperate on HCA GIS matters.
- **Action 7/21 – IHB** to update the Antarctica section of S-55 on the IHO website from the information available at the IHB on hydrographic surveying and nautical charting in Antarctica.
- **Action 7/22 – IHB** to refine the list of layers / sub-layers to appear in the HCA GIS, based on the list shown in Doc. HCA7-7.5B, and circulate it to HCA Members and Observers for comments / approval.

7.6 Nautical Publications and Information. IHO/HCA web page.

IHB (HUET) briefly described the list of nautical publications on Antarctica, which appears on the IHO website (HCA page). It currently includes information provided by Argentina, Australia, France, South Africa and UK. HCA members were encouraged to continue populating this list. Chile (SILVA) mentioned that SHOA publishes Sailing Directions, and other publications, for Antarctic Waters, and would supply the appropriate information to the IHB.

Following SCAR' suggestion, it was agreed that a link would be included in the HCA page to the publications list on the SCAR website.

Outcome:

- **Action 7/23 – IHB** to include a hyperlink to SCAR publications, in the HCA Nautical Publications section on the IHO website.
- **Action 7/24 – Chile** to provide the IHB with information on Chile's nautical publications pertaining to Antarctica, for inclusion in the HCA Nautical Publications section on the IHO website.

7.7 Capacity Building Issues. Needs, Initiatives and Projects.

HCA Chair reported that no need for CBC support to HCA had been expressed. There were no further comments.

8.- HCA SURVEY PROGRAMME WORKING GROUP

Docs: HCA7-8A HCA Survey Programme WG Report

UK (SEWELL) reported that little progress had been made by HSPWG, chaired by UK, due to lack of resources at UKHO. He reminded that HSPWG, with members from Australia, Chile, Germany, Greece, South Africa, COMNAP and IAATO, had produced a scheme of maritime shipping routes (MSR), as well as short-term and long-term HCA survey plans. As a result, a prioritized hydrographic survey plan was developed following HCA-6 (Annex H to Minutes of HCA-6), for MS to use to plan their surveys, thus ensuring there is no duplication of work and that surveys are in line with IPY and INT Chart production. As a way ahead, he suggested the followings:

- Update the HCA prioritized hydrographic survey plan, highlighting HCA surveying plans and charting expectations.
- Prepare a paper to stress the need for accurate charting and modern survey coverage, to ensure reliable and confident navigation for existing and future vessel movements.
- Incorporate document and paper above in presentation to the 31st ATCM in 2008.

This was agreed.

Outcome:

- The Commission noted the report.
- **Action 7/25 – IHB** to update the agreed and prioritized hydrographic survey plan (Annex H to Minutes of HCA-6) from information contained in national reports to the 7th HCA meeting and annex it to the meeting minutes (see Annex I). In the covering IHO CL distributing these minutes, **HCA Chair** to invite all concerned MS to provide information on their survey plans for presentation at the 31st ATCM.

9.- ANY OTHER BUSINESS.

9.1 Preparation of the Seminar and Draft Resolution to be offered to the 31st ATCM

Docs: HCA7-9.1A Draft Program of the Seminar for the 31st ATCM

HCA Chair presented a draft program for an HCA seminar on hydrography in Antarctica to be held in the frame of the 31st ATCM, in Kiev, Ukraine, in June 2008, in accordance with Task 1.2.10 of the IHO Work Programme for 2008. This seminar aims at raising awareness at the politico-strategic level on the importance of hydrographic activity in the Antarctica, for a better understanding of the current status of hydrography and nautical cartography and to identify ways to improve the situation.

HCA Chair indicated that the seminar will be delivered in plenary and will last two hours. It will consist of five presentations of 20 minutes each with a final 20 minutes period for questions from the audience. It is intended and hoped that the seminar will result in an ATCM Resolution on HCA matters. He noted that heads of delegations will meet on the Sunday preceding the 31st ATCM and will decide on the agenda for the meeting; it is therefore important that heads of delegations be briefed by HCA members on this seminar in advance of the meeting.

HCA Chair outlined the provisional programme for the seminar, as follows:

- ✓ 1st presentation: Hydrography in Antarctica, by HCA Chair (GORZIGLIA)
- ✓ 2nd presentation: Hydrography and its contribution to safety of navigation and protection of the marine environment in Antarctic waters, by COMNAP/SHIPOPS (CATALAN)
- ✓ 3rd presentation: Hydrography and its contribution to the Marine Scientific Research, by Germany (SCHENKE).
- ✓ 4th presentation: Status of Hydrography and Nautical Cartography in Antarctica, by France (Ing. en chef Yves GUILLAM).
- ✓ 5th presentation: Practical initiatives to improve hydrography and nautical cartography in Antarctica, by Australia (NAIRN).

ATCM (HUBER) warned that knowledge of ATCM delegates on technical issues is limited; he suggested that presentations at the seminar avoid going into technical details. This would also facilitate the translation work as presentations will have to be in four languages. COMNAP (CATALAN), noting that ATCM delegates are influential in recommending priorities in national Antarctic programmes, stressed the need for an ATCM Resolution on HCA matters, associated with the HCA seminar. UK (MONCRIEFF) suggested combining the proposed 2nd and 4th presentations.

It was agreed that, on the basis of the above draft programme and taking into consideration the comments expressed at the meeting, HCA Chair would liaise with UK, France, COMNAP, and all other potential contributors to the seminar, to refine / improve the programme.

Outcome:

- **Action 7/25 – IHB / HCA Chair** to organize an HCA Seminar to raise awareness on the importance of hydrographic activities in Antarctica, as part of the 31st ATCM.

10.- TIME AND PLACE OF HCA-8 MEETING

The Chair reported that Brazil has offered to host the 8th HCA meeting in Rio de Janeiro, in October 2008. Final dates would take into consideration the next MACHC Meeting planned in Venezuela at this period of the year. The two meetings would be coordinated. Brazil's offer was gratefully and unanimously accepted.

Outcome:

- **Action 7/23 - IHB and Brazil** to coordinate the dates and organization of the 8th HCA Meeting in Rio de Janeiro, in October 2008, taking into consideration that the next MACHC meeting is planned to take place in Caracas, Venezuela, at this period of the year.

11.- APPROVAL OF ACTION LIST

The meeting reviewed the list of actions arising from HCA-7. The agreed list is at Annex E.

12.- CLOSURE

On behalf of the meeting, the Chair warmly thanked the Argentinian hosts for the outstanding arrangements for HCA-7. He also thanked all participants and observers for their excellent contribution to the meeting. He concluded that, in his view, the meeting was very successful.

The meeting closed at 13:00 on 5 October 2007.

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LIST OF ACRONYMS

ADD	Antarctic Digital Database (SCAR)
ATCM	Antarctic Treaty Consultative Meeting
ATS	Antarctic Treaty System
AWI	Alfred Wegener Institute (Germany)
BSH	Bundesamt für Seeschifffahrt und Hydrographie (Germany)
CBC	Capacity Building Committee (IHO)
CGA	Composite Gazetteer of Antarctica (SCAR)
COMNAP	Council of Managers of National Antarctic Programmes
DNO	Department of Navigation and Oceanography (Russia)
ENC	Electronic Navigational Chart
GDA	GEBCO Digital Atlas
GEBCO	General Bathymetric Chart of the Oceans (IHO-IOC)
GIS	Geographic Information System
HCA	Hydrographic Committee on Antarctica (IHO)
HO	Hydrographic Office
HSPWG	HCA Survey Programme Working Group (HCA)
IAATO	International Association of Antarctic Tour Operators
IBCSO	International Bathymetric Chart of the Southern Ocean (IOC&IHO&SCAR)
IHB	International Hydrographic Bureau
IHO	International Hydrographic Organization
IIM	Istituto Idrografico Della Marina (Italy)
IMO	International Maritime Organization
INT	INTernational (Charts) (IHO)
IOC	Intergovernmental Oceanographic Commission (UNESCO)
IPY	International Polar Year (2007-2008)
IRCC	Inter-Regional Coordination Committee (IHO)

JHOD	Japan Hydrographic and Oceanographic Department
M-11	Publication "Catalogue of INT Charts" (IHO)
MACHC	Meso-American and Caribbean Sea Hydrographic Commission (IHO)
MS	Member State
NC	New Chart
NE	New Edition
PSP	Production Systems Programme (UKHO)
MSR	Maritime Shipping Route
RNC	Raster Navigational Chart
RoP	Rules of Procedure
S-55	Publication "Status of Hydrographic Surveying and Nautical Charting" (IHO)
SC-AGI	Standing Committee on Antarctic Geographic Information (SCAR)
SCAR	Scientific Committee on Antarctic Research
SCUFN	Sub-Committee on Undersea Feature Names (GEBCO)
SHIPOPS	Ship Operation Working Group (COMNAP)
SHN	Servicio de Hidrografia Naval
SHOA	Servicio de Hidrografia y Oceanografia de la Armada (Chile)
SHOM	Service Hydrographique et Océanographique de la Marine (France)
SOLAS	Safety Of Life At Sea convention (IMO)
ToR	Terms of Reference
TSCOM	Technical Sub-Committee on Ocean Mapping (GEBCO)
UKHO	United Kingdom Hydrographic Office
UNESCO	United Nations Educational, Scientific and Cultural Organization
WG	Working Group

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LIST OF DOCUMENTS

Document	Content	Responsible
HCA7-1A rev.3	List of Documents	Chairman
HCA7-1B rev.3	List of Participants	Chairman
HCA7-2 A	HCA Membership and Observers List	Chairman
HCA7-3A rev.2	Agenda	Chairman
HCA7-3B	Annotated Agenda	Chairman
HCA7-3C rev.1	Time Table	Chairman
HCA7-5A rev.1	Status of Actions List from the 6 th HCA Meeting	Chairman
HCA7-5B	Proposed amendments to the HCA Statutes.	Vice Chairman
HCA7-6.1A	ATCM Report (including outcomes from the 30 th ATCM)	ATS
HCA7-6.2A	COMNAP Report	COMNAP
HCA7-6.4A	IAATO Report (see HCA7-INF6 and HCA7-INF7)	IAATO
HCA7-6.5A	SCAR SC-AGI Report	SCAR
HCA7-7.1A rev.1	INT Chart Scheme and Production Status for Region 'M'	Secretary
HCA7-7.1B	INT Charts in Progress or Not Produced	Secretary
HCA7-7.1C rev.1	Layout of INT Production Status for Region 'M'	Secretary
HCA7-7.2A rev.2	ENC Production Status in Antarctica	Secretary
HCA7-7.2B	ENC Scheme for Small-Scales in Antarctica	Secretary
HCA7-7.2C	ENC Scheme for Medium-Scales in Antarctica	Secretary
HCA7-7.4A	GEBCO Report	GEBCO Representative
HCA7-7.4B	Undersea Feature Naming Status for Region 'M'	Secretary
HCA7-7.4C	IBCSO Report	IBCSO
HCA7-7.5A	National Reports	HCA Member States
HCA7-7.5B	S-55 Status and GIS for Antarctica – Progress Report	Secretary
HCA7-8A	HCA Survey Programme WG – Progress Report	WG Chairman (UK)
HCA7-9.1A	Draft Program of the Seminar for the 31 st ATCM	Chairman
	INFORMATION DOCUMENTS	
HCA7-INF2	Current HCA Statutes	Secretary
HCA7-INF3	Minutes of the 6 th HCA Meeting, Punta Arenas, Chile, 2006	Secretary
HCA7-INF4	IHO Report submitted to the 30 th ATCM	Secretary
HCA7-INF5	International Coordination of Hydrography in Antarctica: Significance to Safety of Antarctic Ship Operations – Paper submitted by COMNAP to the 30 th ATCM.	Secretary
HCA7-INF6	Report of the International Association of Antarctica Tour Operators 2006-2007	IAATO
HCA7-INF7	IAATO Overview of Antarctic Tourism 2006-2007 Antarctic Season	IAATO

AGENDA

- 1.- **Opening.**
 Docs: HCA7-1A *List of Documents*
 HCA7-1B *List of Participants*
 HCA7-INF1 *Outcomes of the XVII IHC*

- 2.- **HCA Membership Status.**
 Docs: HCA7-2 A *HCA Membership and Observers List*
 HCA7-INF2 *Current HCA Statutes*

- 3.- **Approval of the Agenda.**
 Docs: HCA7-3A *Agenda*
 HCA7-3B *Annotated Agenda*
 HCA7-3C *Time Table*

- 4.- **Election of Vice-Chairman.**

- 5.- **Status of List of Actions resulting from the 6th HCA Meeting.**
 Docs: HCA7-5 A *Status of Actions List from the 6th HCA Meeting*
 HCA7-5B *Proposed amendments to the HCA Statutes.*
 HCA7-INF3 *Minutes of the 6th HCA Meeting, Punta Arenas, Chile, 2006*
 HCA7-INF4 *IHO Report submitted to the 30th ATCM*

- 6.- **Relevant International Organizations' Report.**
 - 6.1 ATCM
 Docs: HCA7-6.1A *ATCM Report (including outcomes from the 30th ATCM)*

 - 6.2 COMNAP
 Docs: HCA7-6.2A *COMNAP Report*
 HCA7-INF5 *International Coordination of Hydrography in Antarctica: Significance to Safety of Antarctic Ship Operations – Paper submitted by COMNAP to the 30th ATCM.*

 - 6.3 IMO
 Docs: HCA7-6.3A *IMO Report*

 - 6.4 IAATO
 Docs: HCA7-6.4A *IAATO Report*

 - 6.5 SCAR
 Docs: HCA7-6.5A *SCAR Report*

 - 6.6 IOC
 Docs: HCA7-6.6A *IOC Report*

- 7.- **HCA Activities in the light of the IHO Work Program:**
 - 7.1 INT chart scheme: progress made since last meeting and actual charting status; new requirements and modifications proposed to the scheme (M-11).
 Docs: HCA7-7.1A *INT Chart Scheme and Production Status for Region 'M'*
 HCA7-7.1B *INT Charts in Progress or Not Produced*

 - 7.2 ENC scheme and production status

Doc: HCA7-7.2A *ENC Production Status in Antarctica*
HCA7-7.2B *ENC Scheme for Small-Scales in Antarctica*
HCA7-7.2C *ENC Scheme for Medium-Scales in Antarctica*

7.3 Bilateral and Regional cooperation agreements and projects.

7.4 Interaction with IOC:

- The IOC/IHO GEBCO Project

Docs: HCA7-7.4A *GEBCO Report*

HCA7-7.4B *Undersea Feature Naming Status for Region 'M'*

- The IBCSO Project, an IOC/IHO/SCAR Project.

Docs: HCA7-7.4C *IBCSO Report*

7.5 Hydrographic surveying, nautical charting, nautical publications and information status.

vii. Presentation of National Reports. Experiences with new techniques and equipment.
Project proposals to speed-up compilation and production.

Docs: HCA7-7.5A *National Reports*

viii. Hydrographic Survey status (S-55)

Docs: HCA7-7.5B *S-55 Status – Progress Report*

7.6 Nautical Publications and Information. IHO/HCA web page.

7.7 Capacity Building Issues. Needs, Initiatives and Projects.

8. HCA Survey Programme Working Group

Docs: HCA7-8A *HCA Survey Programme WG – Progress Report*

HCA7-8B *Prioritized Hydrographic Survey Plan for Antarctica*

9.- Any other business.

9.1 Preparation of the Seminar and Draft Resolution to be offered to the 31st ATCM

Docs: HCA7-9.1A *Draft Program of the Seminar for the 31st ATCM*

10.- Time and Place of next Meeting

11.- Approval of Action List.

12.- Closure

ACTION ITEMS FROM HCA-7

Agenda Item	Action	Details	Responsible & Deadline
2	7/1	Invite those MS that are signatories of the Antarctic Treaty, but are not yet HCA members, to consider HCA membership. (In the covering IHO CL distributing the Minutes of the 7 th HCA Meeting).	Chairman
2	7/2	On receipt of Peru' signature of HCA Statutes, update the HCA page of the IHO website, including the HCA Statutes.	IHB
5	7/3	Prepare a document on SOLAS V Reg. 9 (requiring contracting governments to arrange for the provision of hydrographic services) for presentation at the 31 st ATCM.	Chairman
5	7/4	Provide Capt. Fomin, DNO, Russia, with guidance on how to represent HCA matters within the IBCSO Editorial Board. Write a letter to the Director of DNO, asking for Capt. Fomin's participation in HCA meetings.	Chairman
5	7/5	Approach the two co-chairs of the IPY Coordinating Committee, with a view to obtaining a response / feedback following the submission to them of the short list of surveys.	UK
5	7/6	Circulate the proposed amendments to the HCA Statutes, as agreed at HCA-7 (option 2 – Chairman from IHO Secretariat), to all HCA Members. Annex the option 2 document to the minutes of HCA-7.	Chairman-IHB and Vice Chairman
5	7/7	Submit the proposed amendments to Article 8(e) of the IHO General Regulations, as agreed at HCA-7, to the IHB Directing Committee for further action. Revised Article 8(e) to read: <i>"Full membership is reserved for Member States within the region. In the unique case of the Antarctic region, membership of the Hydrographic Commission on Antarctica (HCA) is reserved to Member States whose governments have acceded to the Antarctic Treaty and contribute resources and/or data to IHO INT Chart coverage of Region M."</i>	Chairman
5	7/8	Use and populate the draft HCA Performance Indicators Table (Annex F to Minutes of HCA-6), for presentation to the 8 th HCA meeting.	IHB
5	7/9	Brief national delegations to ATCM on HCA activities and the importance of hydrography in Antarctica, in order to assign higher priority to hydrography in their national programmes.	HCA Members
7.1	7/10	Update the document showing Charts in Progress or not Produced (Doc. HCA7-7.1B), to be annexed to minutes of the 7 th HCA meeting. Invite all concerned MS, on a case by case basis, to provide information on their chart production plans. Identify available data and seek volunteering producer nations for those INT charts with no producer yet assigned.	IHB-Chairman

Agenda Item	Action	Details	Responsible & Deadline
7.1	7/11	Re-consider USA's involvement regarding the production of INT charts 909, 9062 and 9105, now that USA have full HCA membership.	USA
7.1	7/12	Circulate Brazil's proposal to include two additional charts in the INT Chart Scheme for Region M, as described in Brazil national report to the 7th HCA Meeting, to HCA Members for comments / approval.	IHB
7.2	7/13	Refine the draft ENC scheme for medium scales (navigational purpose 3), as shown in Doc. HCA7-7.2B, and circulate it to HCA Members for comments / approval.	IHB
7.2	7/14	Develop a draft ENC scheme for large scales (navigational purposes 4, 5 and 6) and circulate it to HCA Members for comments / approval.	IHB
7.2	7/15	Update the ENC production plan (Doc. HCA7-7.2A) from the information gathered at, and in national reports to the 7 th HCA Meeting. Annex it to the minutes of this meeting.	IHB
7.4	7/16	Provide SCAR/SC-AGI with GEBCO Guidelines on Undersea feature naming (IHO-IOC Publication B-6).	IHB
7.4	7/17	Invites the IOC Executive Secretary to provide further support to the IBCSO project, which the HCA recognizes and strongly values the importance.	Chairman
7.5	7/18	On receipt of Chile's National Decree 361 creating a National Committee for Antarctic Geographic Toponymy, circulate this document to HCA Members and Observers for information.	IHB
7.5	7/19	Make use of the spreadsheet on hydrographic survey metadata (HCA_Surveys.xls), available from the IHO website, to provide survey updates to the IHB in view of populating the HCA Geographic Information System.	HCA Members
7.5	7/20	Cooperate on HCA GIS matters.	SCAR/SC-AGI and IHB
7.5	7/21	Update the Antarctica section of S-55 on the IHO website from the information available at the IHB on hydrographic surveying and nautical charting in Antarctica.	IHB
7.5	7/22	Refine the list of layers / sub-layers to appear in the HCA GIS, based on the list shown in Doc. HCA7-7.5B, and circulate it to HCA Members and Observers for comments / approval.	IHB
7.6	7/23	Include a hyperlink to SCAR publications, in the HCA Nautical Publications section on the IHO website.	IHB
7.6	7/24	Provide the IHB with information on Chile's nautical publications pertaining to Antarctica, for inclusion in the HCA Nautical Publications section on the IHO website.	Chile
8.	7/25	Update the agreed and prioritized hydrographic survey plan (Annex H to Minutes of HCA-6) from information contained in national reports to the 7 th HCA meeting and annex it to the meeting minutes. In the covering IHO CL distributing these minutes, invite all concerned MS to provide information on their survey plans for presentation at the 31 st ATCM.	IHB-Chairman
9.1	7/26	Organize an HCA Seminar to raise awareness on the importance of hydrographic activities in Antarctica, as part of the 31 st ATCM.	Chairman-IHB

Agenda Item	Action	Details	Responsible & Deadline
10.	7/27	Coordinate the dates and organization of the 8th HCA Meeting in Rio de Janeiro, in October 2008, taking into consideration that the next MACHC meeting is planned to take place in Caracas, Venezuela, at this period of the year.	Chairman-IHB and Brazil

**PROPOSED AMENDMENTS TO THE STATUTES OF THE IHO
HYDROGRAPHIC COMMITTEE ON ANTARCTICA (HCA)**

Option 2 – Chairman from IHO Secretariat

Notes

There are two timelines affecting the proposed amendments, i.e implementation dates of (i) the re-structuring of the IHO Committees, and (ii) the revised IHO Convention.

i. Amended document text

These are proposed amendments to be effective from the date when the Inter Regional Coordination Committee (IRCC) is established - 1 January 2009 as per Decision No. 9 of the XVIIth IH Conference in May 2007.

ii. Shown within square brackets [] in the document

These are proposed amendments to be effective when the revised IHO Convention enters force, i.e. the Secretariat, Council and assembly are established. It would effectively result in replacing Clauses 1.1, 3.2, 3.5, 4.1, 5.1, 5.3, and 5.4, and including an additional clause 5.5.

STATUTES OF THE IHO HYDROGRAPHIC COMMISSION OF ANTARCTICA (HCA)

Article 1

GENERAL

- 1.1 The IHO Hydrographic Commission on Antarctica (hereinafter referred to as “HCA”) is a special Hydrographic Commission of the International Hydrographic Organisation (IHO). The HCA is established in conformity with Administrative Resolution T 1.3 of the IHO “*Establishment of Regional Hydrographic Commissions (RHC)*” (Appendix A) and shall be governed according to these statutes.
- [1.1 The IHO Hydrographic Commission of Antarctica (hereinafter referred to as “HCA”) is a special Hydrographic Commission of the International Hydrographic Organisation (IHO). The HCA is established in conformity with IHO General Regulations Article 8 and shall be governed according to these statutes.]
- 1.2 The HCA shall be a subordinate of the IHO Inter Regional Coordination Committee (IRCC).
- 1.3 The HCA is responsible for hydrographic surveying and nautical charting matters in International Region M. The geographic limits of this region are illustrated at Appendix B.

Article 2

MEMBERSHIP

- 2.1 Membership of the HCA is open to any IHO Member State whose government has acceded to the Antarctic Treaty and which contributes resources and/or data to IHO INT Chart coverage of Region M (see Appendix B) and which becomes a signatory to the Statutes of the HCA.

- 2.2 Associate Membership is open to any non-IHO Member State whose government has acceded to the Antarctic Treaty and which contributes resources and/or data to IHO INT Chart coverage of Region M, and which becomes a signatory to the Statutes of the HCA. Associate Members may take part in the discussions but shall not have voting rights, except as contained in Articles 4.2 and 4.3.
- 2.3 Observer status in the HCA is open to any other IHO Member State, to the representatives of any national or international organisation, and to individual experts, having professional involvement in hydrographic surveying or nautical charting in Region M either by contributing to those activities, or by providing support to those activities, or as users of derived products. The participation of Observers in any activity of the HCA will be subject to the prior approval of the Chairman of the HCA. The Observers may take part in the discussions but shall not have voting rights.

Article 3

AIMS

The aims of the HCA, which is an integral part of the IHO, shall be:

- 3.1 To promote technical co-operation in the domain of hydrographic surveying, marine cartography, and nautical information within the region.
- 3.2 To stimulate the Members, Associate Members and Observers forming the HCA to widen hydrographic activity in the region in accordance with Antarctic Treaty Consultative Meeting (ATCM) Resolution 3 of 2003 (Appendix C), and to encourage them to seek technical advice and assistance from the International Hydrographic Bureau (IHB) in establishing and strengthening their hydrographic capabilities in order to promote safe navigation in the region.
- [3.2 To stimulate the Members, Associate Members and Observers forming the HCA to widen hydrographic activity in the region in accordance with Antarctic Treaty Consultative Meeting (ATCM) Resolution 3 of 2003 (Appendix C), and to encourage them to seek technical advice and assistance from the IHO Secretariat in establishing and strengthening their hydrographic capabilities in order to promote safe navigation in the region.]
- 3.3 To facilitate the exchange of information between Hydrographic Authorities and with other organisations concerning surveys, research or scientific, technical and operational developments, to aid in the planning and organization of hydrographic activities in the widest sense of the term.
- 3.4 To encourage Members, Associate Members and Observers forming the HCA to participate actively, of their own free will, on all possible occasions – whether in the form of advice or of assistance – in those hydrographic programmes requiring concerted action, but without prejudice to or interference with their national activities.
- 3.5 To examine the implications, in its area of interest, of matters of general interest with which the IHO is concerned, avoiding any interference with the prerogatives of the IHB and of any other Regional Commissions set up by the IHO.
- [3.5 To examine the implications, in its area of interest, of matters of general interest with which the IHO is concerned, avoiding any interference with the prerogatives of the IHO Secretariat and of any other Regional Commissions set up by the IHO.]
- 3.6 To implement the INT chart scheme for the region and to monitor its suitability.
- 3.7 To define the needs for new surveys and if necessary to develop co-operative approaches to meet those needs.

- 3.8 To facilitate the provision and wide dissemination of information for scientific purposes (for example through the GEBCO programme).
- 3.9 To carry out studies as a Working Group of the IHO, when considered appropriate.
- 3.10 To develop an annual report of the status and plans for hydrographic surveys in the region, including updating and amplifying relevant IHO Publications.
- 3.11 The HCA may appoint working groups of Members and Associate Members interested in particular projects with the object of examining and executing such projects.

Article 4

MEETINGS

- 4.1 The HCA shall meet in plenary meeting in the country of one of its Members or Associate Members, or such other venue as may be selected, at least twice between two successive ordinary sessions of the International Hydrographic Conference (IHC).
- [4.1 The HCA shall meet in plenary meeting in the country of one of its Members or Associate Members, or such other venue as may be selected, at least once between two successive ordinary sessions of the Assembly.]
- 4.2 At the end of each meeting the Members and Associate Members desirous of hosting the following meeting shall put forward their candidatures. Priority shall be given to a country that has not yet hosted a meeting, or to the one that did so the longest time ago. In cases of equal priority a vote shall be held, the decision being taken by a simple majority of Members and Associate Members present.
- 4.3 If it is in the interest of the HCA, and agreed upon by a simple majority of Members and Associate Members, an alternative venue may be selected.
- 4.4 Members and Associate Members shall be represented at meetings by heads of Hydrographic Services or their nominees or, where such services do not exist, by heads of national authorities responsible for hydrography and navigation. They may be accompanied by advisors, but it is most desirable that their number be kept to a minimum.
- 4.5 The presence of a third (1/3) of the Members of the HCA shall constitute a quorum at all meetings.

Article 5

CHAIRMAN, VICE-CHAIRMAN AND SECRETARIAT

- 5.1 The activities of the Committee shall be conducted by the Chairman, who shall be a Director of the IHB appointed by the President of the Directing Committee of the IHB. The Chairman shall also preside over the conference.
- [5.1 The activities of the Committee shall be conducted by the Chairman, who shall be a member of the IHO Secretariat appointed by the Secretary General of the IHO. The Chairman shall also preside over the conference]

- 5.2 The Chairman shall be assisted by a Vice-Chairman from a Member State of the HCA. The Vice-Chairman shall be elected at the beginning of each Meeting by a simple majority of those Members present.
- 5.3 The HCA will have its permanent secretariat at the IHB. The secretariat will provide the secretariat and administrative support needed to gather, hold and disseminate information on behalf of the HCA. The HCA will also have a Secretary nominated by the Directing Committee of the IHB. The Secretary will provide direct support to all activities of the Chairman including preparing a summary of the HCA's activities to be included in the Annual Report.
- [5.3 The HCA will have its permanent secretariat at the IHO Secretariat. The secretariat will provide the secretariat and administrative support needed to gather, hold and disseminate information on behalf of the HCA. The HCA will also have a Secretary nominated by the IHO Secretariat. The Secretary will provide direct support to all activities of the Chairman including preparing a summary of the HCA's activities to be included in the Annual Report.]
- 5.4 The Chairman will report the activities and future plans of the HCA to the IRCC Chairman for further report to each ordinary session of the IHC. Between sessions, reports of studies or other activities, which may be considered of general interest to all Member States, should be reported through the Chairman to the IHB for general dissemination.
- [5.4 The Chairman will report the activities and future plans of the HCA to the IRCC Chairman for further report to each ordinary session of the Assembly through the Council. Between sessions, reports of studies or other activities, which may be considered of general interest to all Member States, should be reported through the Chairman to the IHO Secretariat for general dissemination].
- [5.5 A member who holds a seat on Council will be nominated to represent HCA matters at Council.]

Article 6

ORGANISATIONS OF MEETINGS

- 6.1 The Chairman shall issue invitations at least one year before the meeting.
- 6.2 Proposals to be included in the agenda of a meeting shall be sent to the Chairman and Secretary at least four months before the date fixed for the opening of the meeting.
- 6.3 The Secretary shall prepare the Provisional Agenda in consultation with the Chairman, Vice-Chairman and host nation, and forward it to the participants at least eight weeks before the opening of the meeting. The Secretary will present, as the first item in the agenda, his report on the activities of the HCA since the last meeting.
- 6.4 The Secretary shall be responsible for the organization of the meeting, in conjunction with the Chairman, Vice-Chairman and host nation.
- 6.5 The host nation shall provide the Rapporteur and the secretarial facilities for the meeting.
- 6.6 The host nation shall be responsible for the expenses of the meeting except those expenses described in Article 6.8 below.
- 6.7 The host nation will assist with the arrangement of authorisations and visas, so as to facilitate attendance at the meeting.

- 6.8 All expenses connected with the participation of the Chairman and the delegates in the meeting shall be defrayed by their respective organizations.

Article 7

MEETING AGENDA

- 7.1 The Agenda shall be adopted by the HCA at the beginning of each meeting.
- 7.2 The HCA may modify in the course of the meeting the order in which Agenda items are to be discussed.

Article 8

DECISIONS AND RESOLUTIONS

- 8.1 Decisions taken during each meeting should be prepared in written form by the Chairman and presented the next day to the participants present.
- 8.2 At the end of the meeting, the Chairman shall circulate the decisions taken during the meeting. These decisions shall be adopted by means of a simple majority of the members present. Votes in favour shall be indicated by a show of hands unless a secret ballot is requested by any Member present. However, when the Chairman, or a majority of Members present, decide that the decision so requires, the decision shall be made by correspondence. Such decision will be approved by a simple majority of the Members who have responded by the due date, provided that the number of votes received is at least equal to the quorum indicated in Article 4.5.
- 8.3 Only Members are entitled to vote, each having the right to one vote. The exception to this rule is found at Articles to 4.2 and 4.3.
- 8.4 All decisions become operative immediately, except in the case where a Member objects and asks that the matter be referred to the IHO. However, such a procedure shall not be applicable to the provisions of articles 4.2 and 4.3, concerning the hosting of meetings.
- 8.5 The Secretary, on the approval of the Chairman, shall dispatch within one month of the close of the meeting a copy of the draft Minutes containing the discussions, decisions and recommendations of the meeting for verification or comment, to each Member, Associate Member and Observer. Comments are to reach the Chairman within one month of the receipt of the Summary Report. The final version of the Minutes shall be forwarded within four months of the close of the Meeting.
- 8.6 Any decision, which may be of interest to the Member States of the IHO as a whole, shall be brought to the attention of the IHB. This fact shall be mentioned as part of the text of the decisions reached.
- [8.6 Any decision, which may be of interest to the Member States of the IHO as a whole, shall be brought to the attention of the IHO Secretariat. This fact shall be mentioned as part of the text of the decisions reached.]

Article 9

EXTRAORDINARY MEETINGS

- 9.1 The Chairman may call a meeting of the Members and Associate Members of the HCA when their representatives are assembled for a session of the IHC, inviting others qualified to attend as Observers.
- [9.1 The Chairman may call a meeting of the Members and Associate Members of the HCA when their representatives are assembled for a session of the IHO Assembly, inviting others qualified to attend as Observers.]
- 9.2 In the case of urgent matters, which cannot be treated by correspondence and which cannot be postponed until the next meeting, the Chairman, or a majority decision of the meeting may request that an extraordinary meeting be held in a place considered most appropriate.
- 9.3 The provisions applicable to the meeting shall apply to all extraordinary meetings.
- 9.4 When these extraordinary meetings do not include all Members, the decisions reached shall be reported by correspondence.

Article 10

STATUTES

- 10.1 The IHB shall be the custodian of these Statutes.
- [10.1 The IHO Secretariat shall be the custodian of these Statutes.]
- 10.2 Members of the HCA may propose amendments to the Statutes. The Chairman shall submit the proposal(s) by correspondence to all Members for voting. A simple majority of Members of HCA is required for approval. If an amendment is approved, The Chairman will update the Statutes and circulate them to all Members, Associate Members and Observers.
- 10.3 Updated versions of the IHO and ATCM resolutions will be added to the Statutes, as appropriate, by the Chairman without the approval of the Members of the HCA. The changes would not constitute formal amendments to the Statutes.

Article 11

LANGUAGE OF THE HCA

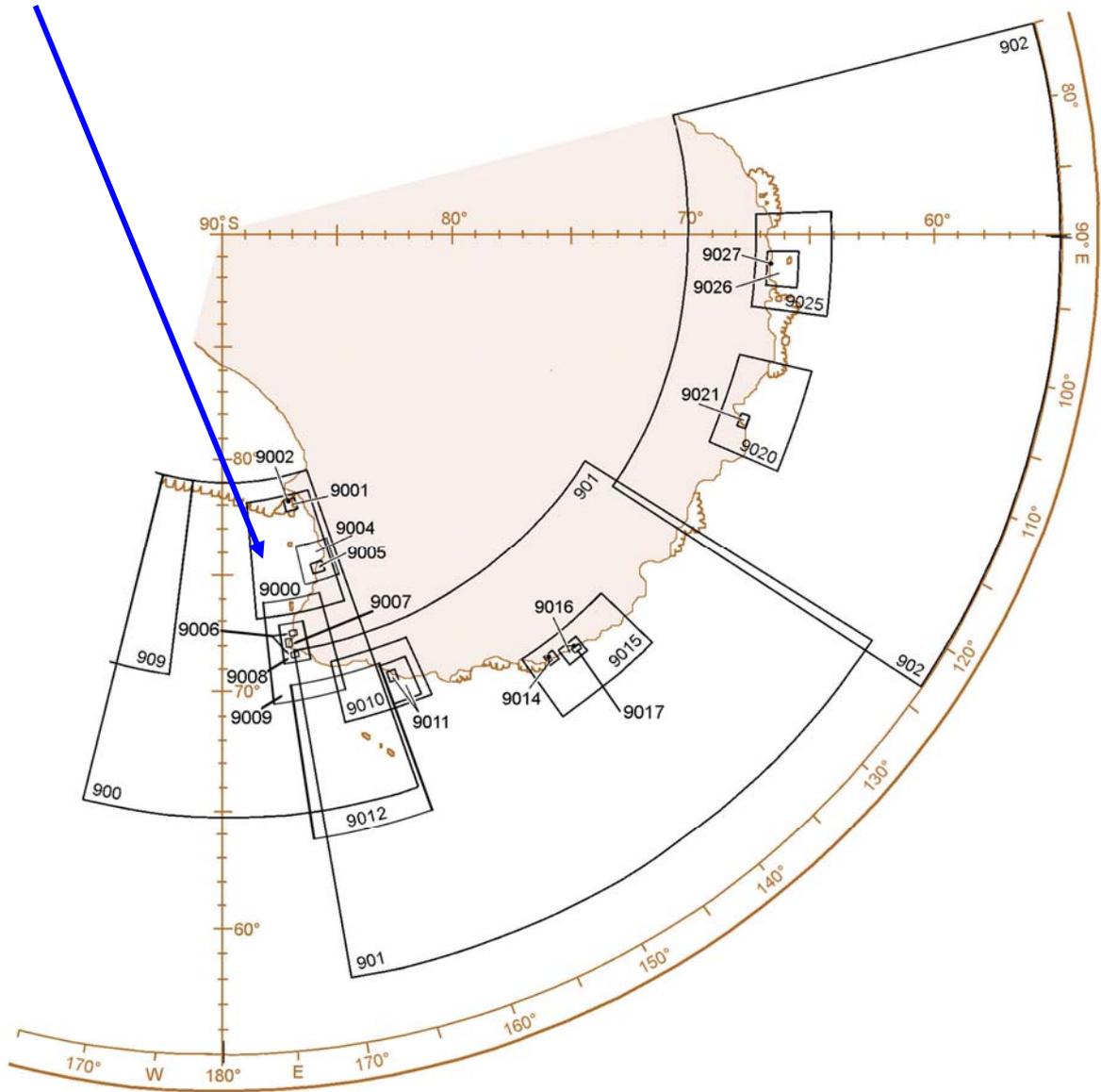
- 11.1 The working language of the HCA shall be English.

Appendices:

- A. Resolution T 1.3 of the IHO [Adopted by the XVI IHC, 2002]
- B. Geographic Limits of IHO INT Chart Region M
- C. Resolution of the Antarctic Treaty Consultative Meeting 2003

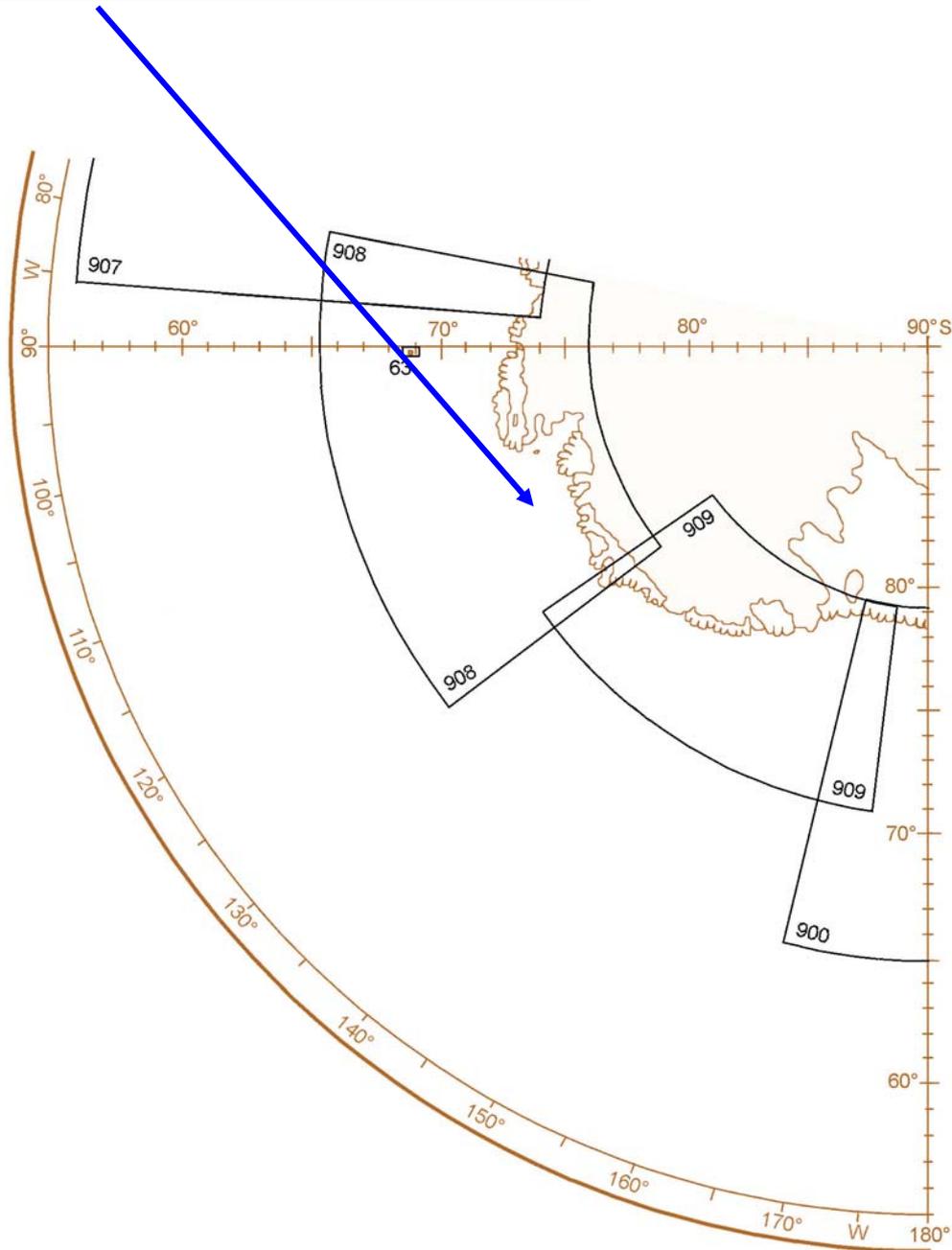
Davies Sea to Ross Sea (75°E – 165°W)

INT No.	Scale 1:	Date	Producer
9000	500 000	Proj. 2008?	IT



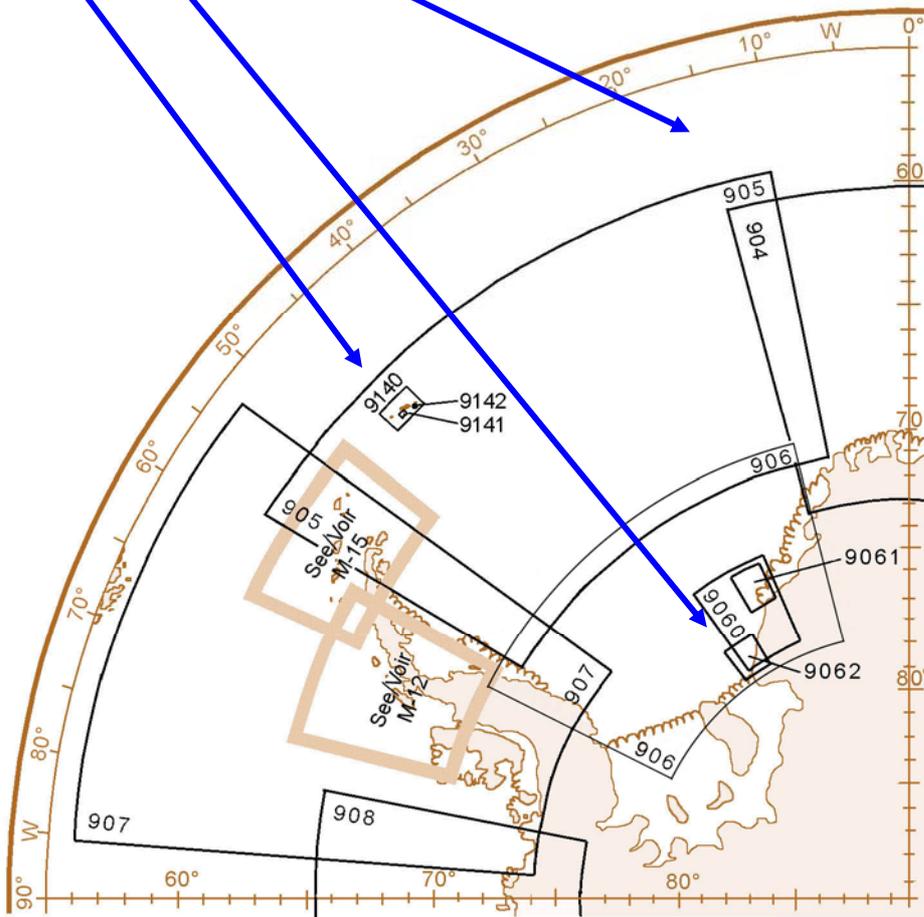
Ross Sea to Bellingshausen Sea (180°W – 80°W)

INT No.	Scale 1:	Date	Producer
908	2 000 000		GB
909	2 000 000		???



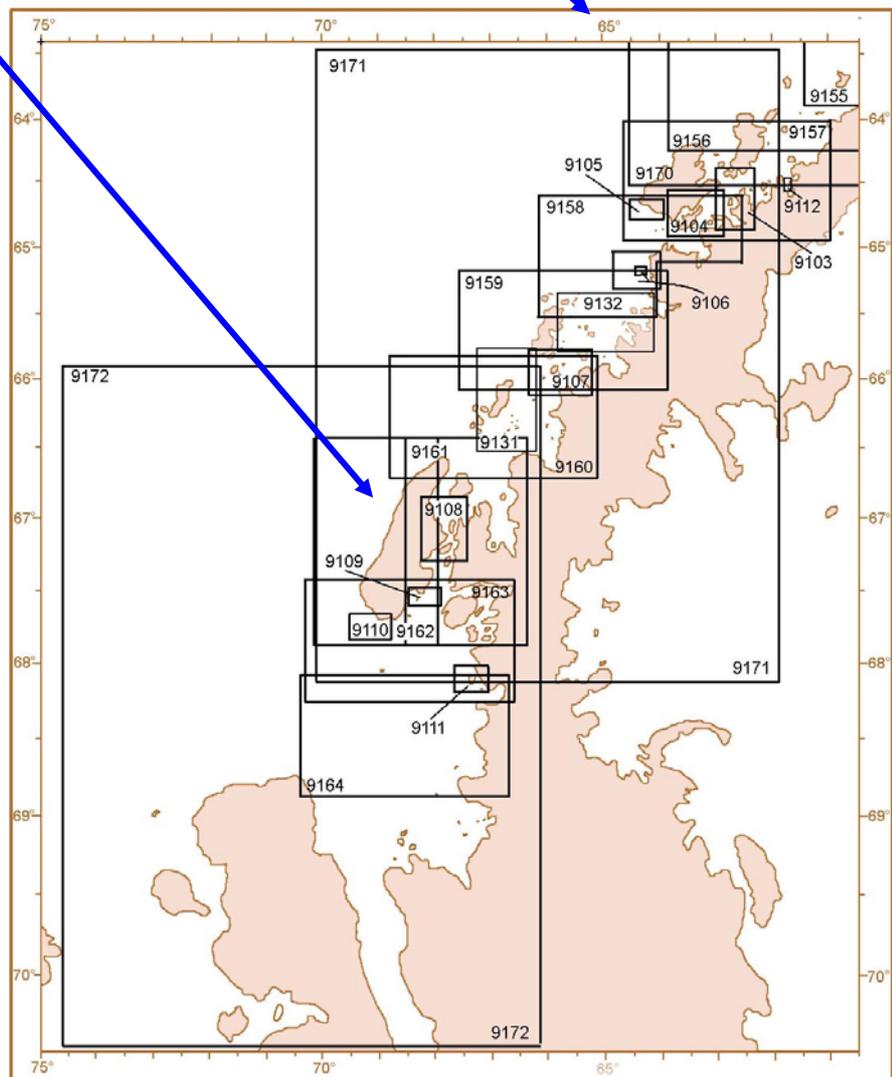
Bellingshausen Sea to Weddell Sea (90°W – 0°W)

INT No.	Scale 1:	Date	Producer
905	2 000 000		DE
9062	200 000		???
9140	150 000		AR



Antarctic Peninsula, Graham Land – Palmer Land

INT No.	Scale 1:	Date	Producer
9103	50 000		CL
9104	50 000		CL
9105	25 000		???
9107	50 000		GB
9108	50 000		CL
9110	30 000		CL
9111	25 000	Proj. 2012	AR
9131	75 000		GB ?
9132	75 000		GB ?
9157	150 000		CL
9159	150 000	Proj. 2009	GB
9160	150 000	Proj. 2009	GB
9161	150 000		CL
9162	150 000	Proj. 2010	CL
9163	150 000	Proj. 2008	GB
9164	150 000	Proj. 2010	CL
9171	500 000		GB



ENC PRODUCTION STATUS

For

INT REGION 'M'

October 2007

ANTARCTIC WATERS

Coordinator : IHB

Summary

Status of ENC production in Antarctica, as of October 2007, is as follows:

- Chile has 2 ENCs in production based on INT 9102 (CL5MA890) and 9155 (CL5MA800). They are planned for release in April 2008.
- UK has published 3 "overview" ENCs based on INT 24 (GB104024), INT 64 (GB104064) and INT 75 (GB104075). In addition 8 ENCs are under preparation, based on INT 907 (GB104907), INT 9106 (GB47211A), INT 9109 (GB472010), INT 9153 (GB372220), INT 9154 (GB372210) and INT 9158 (GB57211A), and on national charts BA 3580 (GB372010) and BA 4063 (GB104063); all these ENCs are planned for release before end 2008.
- France plans to publish 3 ENCs in 2007-08, based on INT 9016 and INT 9017.
- Italy plans to publish 2 ENCs in end 2007, based on INT 9004 and INT 9005.
- Norway plans to publish an ENC in 2008, based on INT 904.

LAZAREV SEA TO COOPERATION SEA (20°W – 90°E)

INT No.	Scale 1:	Latest Edition	INT Producer	ENC available	ENC Producer	Edition Date	ENC Number
903	2 000 000	2001	RU	No			
904	2 000 000	2002	NO	No	NO	Proj. 2008	
9030	500 000	1992	AU	No	AU	Proj. 2010	
9031	500 000	2002	AU	No	AU	Proj. 2010	
9032	12 500	2003	AU	No	AU	Proj. 2010	
9033	500 000	1991	AU	No	AU	Proj. 2010	
9035	500 000	1993	AU	No	AU	Proj. 2010	
9036	25 000	1987	AU	No	AU	Proj. 2010	
9037	25 000	2007	AU	No	AU	Proj. 2010	
9040	500 000	2000	RU	No			
9041	100 000	1999	RU	No			
9042	12 500	1999	RU	No			
9045	500 000		JP	No			
9046	100 000		JP	No			
9047	10 000		JP	No			
9050	500 000	1999	RU	No			
9051	200 000	1998	RU	No			
9055	500 000	Proj. 2008	DE	No			
9056	300 000	2005	ZA	No			
9057	200 000	Proj. 2008	DE	No			

DAVIES SEA TO ROSS SEA (75°E – 165°W)

INT No.	Scale 1 :	Latest Edition	INT Producer	ENC available	ENC Producer	Edition Date	ENC Number
900	2 000 000	1998	NZ	No			
901	2 000 000	2006	FR	No			
902	2 000 000	2000	RU	No			
9000	500 000	Proj. 2008?	IT	No			
9001	50 000	2007	NZ	No			
9002	5 000	2007	NZ	No			
9004	250 000	2007	IT	In prog.	IT	Proj. end 2007	
9005	50 000	2000	IT	In prog.	IT	Proj. end 2007	
9006	50 000	2003	NZ	No			
9007	60 000	2003	NZ	No			
9008	200 000	2003	NZ	No			
9009	500 000	2004	NZ	No			
9010	500 000	2000	RU	No			
9011	200 000	2000	RU	No			
9012	750 000	2006	NZ	No			
9014	25 000	2002	AU	No	AU	Proj. 2010	
9015	500 000	2004	FR	No			
9016	100 000	2004	FR	In prog.	FR	Proj. 2008	
9017	20 000	2002	FR	In prog.	FR	Proj. end 2007	
9020	500 000	1998	AU	No	AU	Proj. 2010	
9021	50 000	1999	AU	No	AU	Proj. 2010	
9025	500 000	1999	RU	No			
9026	200 000	1999	RU	No			
9027	10 000	1999	RU	No			

ROSS SEA TO BELLINGSHAUSEN SEA (180°W – 80°W)

INT No.	Scale 1:	Latest Edition	INT Producer	ENC Available ?	ENC Producer	Edition Date	ENC Number
908	2 000 000		GB	No			
909	2 000 000		???	No			

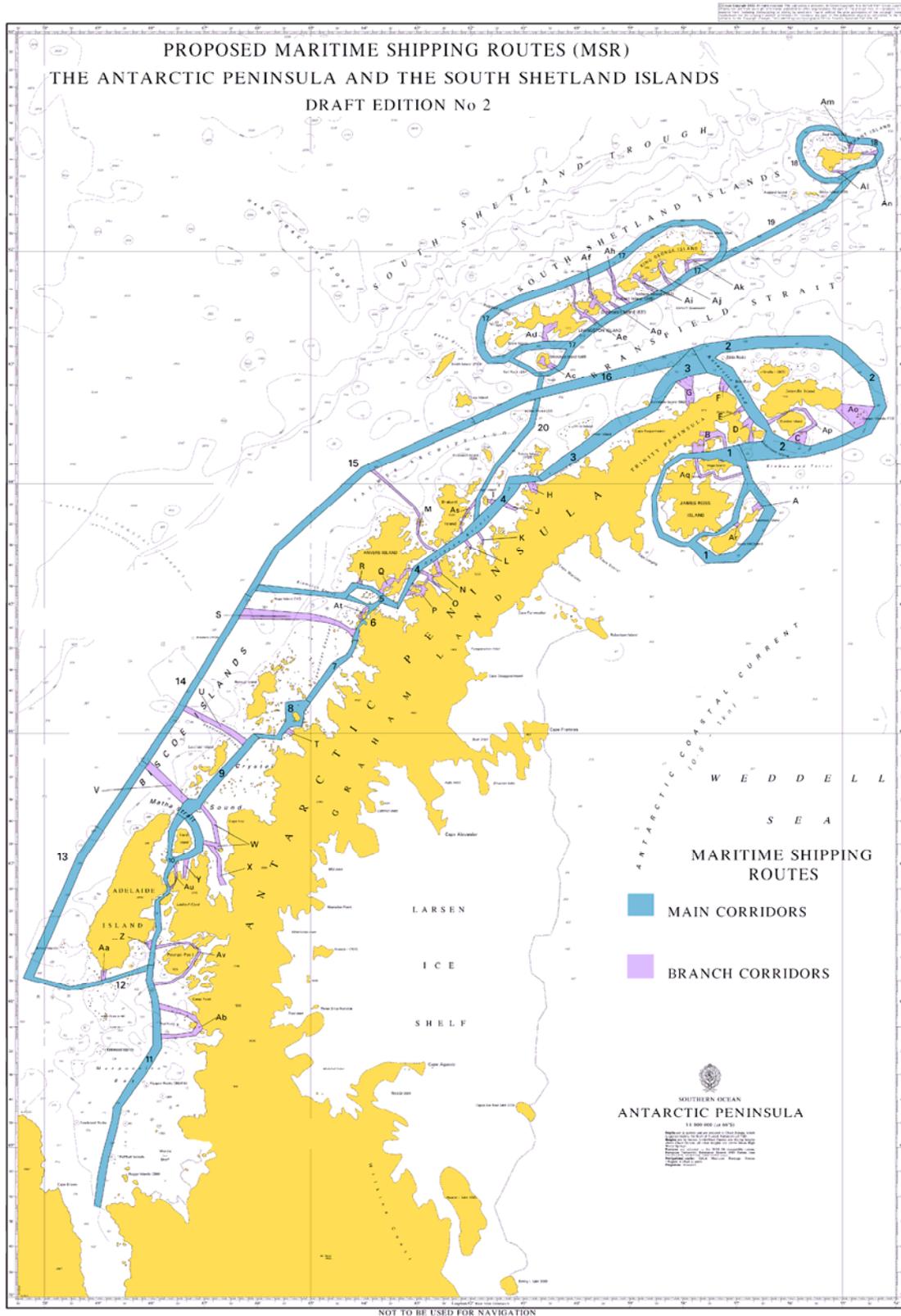
BELLINGSHAUSEN SEA TO WEDDELL SEA (90°W – 0°W)

INT No.	Scale 1:	Latest Edition	INT Producer	ENC Available	ENC Producer	Edition Date	ENC Number
905	2 000 000		DE	No			
906	2 000 000	2005	GB	No			
907	2 000 000	2000	GB	In prog.	GB	Proj. 2008	GB104907
9060	500 000	2000	RU	No			
9061	200 000	2005	GB	No			
9062	200 000		???	No			
9140	150 000		AR	No			
9141	50 000	2006	GB	No			
9142	10 000	2006	AR	No			

ANTARCTIC PENINSULA, GRAHAM LAND – SOUTH SHETLANDS ISLANDS

INT No.	Scale 1:	Latest Edition	INT Producer	ENC available	ENC Producer	Edition Date	ENC Number
9100	25 000		AR	No			
9101	10 000		AR	No			
9102	10 000	2003	CL	In prog.	CL	Proj. 04/2008	CL5MA890
9112	Various		GB	No			
9113	Various		GB	No			
9114	Various		???	No			
9115	50 000		AR	No			
9116	Various		GB ?	No			
9120	50 000	2006	AR	No			
9121	35 000	1998	ES	No			
9122	20 000	1998	CL	No			
9123	10 000	2007	CL	No			
9124	25 000		CL	No			
9125	40 000	Proj. 2010	BR & PE	No	BR	Proj. 2011	
9130	75 000		GB ?	No			
9150	200 000	1999	BR	No	BR	Proj. 2011	
9153	150 000	2004	GB & AR	In prog.	GB	Proj. end 2008	GB372220
9154	150 000	2002	GB & AR	In prog.	GB	Proj. end 2008	GB372210
9155	150 000	2003	CL	In prog.	CL	Proj. 04/2008	CL3MA800
9156	150 000	2007	AR	No			
9170	500 000	1997	AR	No			

PRIORITIZED HYDROGRAPHIC SURVEY PLAN FOR ANTARCTICA
(Updated to October 2007)



HCA LONG TERM SURVEY PLAN

Table of MSRs, base/site calls, usage category, and current survey category

Note: In the tables below, high priority surveys have been emphasized in **yellow**. Indications of planned surveys appear in **red**. Indications of surveys completed appear in **blue**.

I. ANTARCTIC PENINSULA

Categories

Category	Usage
A	Frequent
B	Regular
C	Infrequent

Category	Current survey status
A	Adequately surveyed
B	Requires re-survey at larger scale or to S-44 standard
C	Has not been systematically surveyed/Unsurveyed

Main corridors (see diagram on last page for MSR references)

MSR *	Name	Usage category	Survey category	Notes and INT chart coverage. Published and <i>proposed</i> .
1	James Ross Island circular route	B+C	A + C	45% surveyed (Prince Gustav Channel), 55% unsurveyed. In UKHO survey plan. INT 9153. <i>Blocks surveyed by UK in 05/06 and 06/07. Block planned by UK in 07/08.</i>
2	Joinville Island circular route	A+B	A + C	45% surveyed (Antarctic Sound), 55% unsurveyed. INT 9154. <i>Blocks surveyed by UK in 05/06 and 06/07. Block planned by UK in 07/08.</i>
3	Orleans Strait to Antarctic Sound	B	B + C	INT 9155
4	Gerlache strait	A	A + C	65% surveyed, 35% unsurveyed. INT 9156 & 9157. Blocks surveyed by UK in 05/06 and 06/07.
5	Bismarck Strait	A+B	A + B	Approaches to Palmer Station and Port Lockroy. INT 9158. <i>Block surveyed by UK in 05/06.</i>
6	Lemaire Channel	A	B	Petermann Is, Pleneau Is, Argentine Is, Yalour Is. INT 9106. <i>Block surveyed by UK in 05/06.</i>
7	Grandidier Channel	A+B	B	INT 9158 & 9159
8	Cape Garcia to Jagged Island	B	C	INT 9159
9	Crystal Sound	B	B	Numerous reports of uncharted rocks. INT 9160
10	Liard Island to Rothera	B	C	INT 9161, 9108 AND 9163
11	Marguerite Bay	C	B + C	INT 9163 & 9164
12	Woodfield Channel	C	B	INT 9163
13	Woodfield Channel to Matha Strait	B	C	INT 9162 & 9160
14	Matha Strait to Hugo Island	B	C	INT 9160, 9159 & 9158
15	Hugo Island to Low Island	B	B + C	INT 9156, 9157 & 9158
16	Low Island to Antarctic Sound	C	B + C	INT 9154, 9155 & 9156. <i>Block planned by UK in 07/08.</i>

* MSR = Maritime Shipping Route. The figures / letters in this column are shown on the MSR diagram which is at Appendix 3.

17	South Shetlands MSR	A	C	INT 9151. Blocks surveyed by UK in 05/06 and 06-07. Block planned by UK in 07/08. Block planned by Brazil in 07/08.
18	Elephant Island MSR	A+C	C	INT 9150. Blocks surveyed by Brazil in 05/06 and 06/07.
19	Elephant Island to KGI	A	C	INT 9150, INT 9151. Block surveyed by Brazil in 05/06.
20	Deception Is to Brabant Island	A	C	INT 9120, INT 9155, 9156, 9157. Block surveyed by UK in 05/06.

Branch corridors and approaches

MSR	Name	Usage category	Survey category	Notes and INT chart coverage. Published and proposed
A	Marambio	B	C	INT 9100
B	Duse Bay and Eagle Island	B	C	Includes Crystal Hill. INT 9154
C	Paulet Island	A	A + C	50% surveyed, remaining area top of UKHO priority. INT 9112. Block surveyed by UK in 05/06.
D	Brown Bluff and Fridtjof Sound	A	C	INT 9154. Block surveyed by UK in 06/07.
E	Hope Bay	A	B	INT 9101. Block surveyed by UK in 06/07.
F	Gourdin Island and Siffrey Point	B	C	INT 9154
G	Bernado O' Higgins and approaches	C	C	INT 9102
H	Curtiss Bay	C	C	INT 9155 & 9156
I	Hydrurga Rocks	B	C	INT 9156 & 9157
J	Alcock Island	C	C	INT 9156 & 9157
K	Portal Point	C	C	INT 9112
L	Enterprise Island	B	C	INT 9157
M	Melchior Islands and approaches	A+C	C	INT 9157. Block surveyed by UK in 05/06.
N	Errera Channel	A	C	Includes Cuverville Is, Danco Is and Ronge Is. INT 9103. Block surveyed by UK in 05/06.
O	Andvord Bay	A	C	Includes Neko Harbour. INT 9103. Block surveyed by UK in 05/06.
P	Paradise Harbour	A	C	Almirante Station and Waterboat Point. INT 9104. Block planned by UK in 07/08.
Q	Neumayer Channel and Port Lockroy	A	A + C	75% surveyed, 25% unsurveyed. North Neumayer Channel to finish. INT 9158 & 9104. Block surveyed by UK in 05/06.
R	Arthur harbour	B	C	INT 9105
S	French Passage	B	B	INT 9106
T	Prospect Point	B	C	INT 9107
U	Pendleton Strait	B	B	INT 9159
V	Matha Strait	B	C	INT 9160
W	Detaille Island and approaches	C	C	INT 9161
X	Lallemand Fjord	C	C	INT 9161
Y	Shumskiy Cove	C	C	INT 9108
Z	Rothera	B	A	BAS and RN vessels. INT 9109
Aa	Avian Island	C	B	INT 9110
Ab	Approaches to Millerand Island	C	B	INT 9111

MSR	Name	Usage category	Survey category	Notes and INT chart coverage. Published and proposed
Ac	Deception Island and Port Foster	A	B	Whalers Bay. INT 9120. <i>Block surveyed by UK in 05/06.</i>
Ad	South bay and Hannah Point	A	A	INT 9121. <i>Block surveyed by UK in 06/07.</i>
Ae	McFarlane Strait	A	A + C	Half Moon Is cat A, Yankee Harbour cat B, rest cat C. INT 9121 & 9112. <i>Blocks surveyed by UK in 05/06 and 06/07.</i>
Af	English Strait	A	B	Aithcho Islands and Discovery Bay. INT 9122 & 9152. <i>Block surveyed by UK in 05/06. Fort Williams surveyed by Ecuador in 2004.</i>
Ag	Robert Point	C	C	INT 9151
Ah	Nelson Strait	C	C	INT 9151. <i>Block surveyed by UK in 05/06. Blocks surveyed by Chile in 05/06 and 06/07. Blocks planned by Chile in 07/08.</i>
Ai	Maxwell Bay and approaches	A	B	Ardley Cove, Marian Cove and Potter Cove. INT 9123. <i>Block surveyed by UK in 05/06. Potter Cove surveyed by Argentina in 05/06.</i>
Aj	Admiralty Bay	A	B	Artowski Station, Ferraz Station and Martel Inlet. INT 9125. <i>Block surveyed by Peru in 02/03 and 05/06. Block planned by Peru in 07/08.</i>
Ak	Penguin Island and approaches	A	C	Endurance 2005 survey. INT 9151
Al	Cape Lookout	B	C	INT 9112. <i>Block surveyed by Brazil in 05/06.</i>
Am	Point Wild	A	C	INT 9150. <i>Block surveyed by Brazil in 05/06.</i>
An	Cape Valentine	B	C	INT 9150. <i>Block surveyed by Brazil in 05/06.</i>
Ao	Danger Islands	C	C	INT 9154
Ap	Dundee Island	B	C	INT 9154. <i>Block surveyed by UK in 05/06. Block planned by UK in 07/08. Blocks surveyed by Argentina in 05/06 and 06/07.</i>
Aq	Herbert Sound	B	C	INT 9153. <i>Blocks surveyed by UK in 05/06 and 06/07.</i>
Ar	Historic Monument	B	C	INT 9153
As	Freud Passage	B	C	INT 9156 & 9157
At	Booth Is, Port Charcot	B	C	INT 9158
Au	Gunnel Channel	B	C	INT 9108 & 9161
Av	Pourqoi Pas Island	C	C	INT 9163 & 9161. <i>Block planned by UK in 07/08.</i>

II. MAINLAND ANTARCTICA**

Main corridors

MSR	Name	Usage category	Survey category	Notes and INT chart coverage. Published and proposed.
	Hobart to Macquarie Island	C	A + B	Annual re-supply station by Aurora Australis. Tourist vessels and fishing boats Charts - Hobart AUS173 and 174 Macquarie Island – AUS604 Cape Darnley to Tasmania - INT 74 (AUS 4074)

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MSR	Name	Usage category	Survey category	Notes and INT chart coverage. Published and proposed.
	Hobart to Casey station	C	A + B	Annual re-supply of station by Aurora Australis and other vessel plus occasional tourist vessels. Charts. Hobart AUS173 and 174 Casey - INT9021 (AUS601) Cape Darnley to Tasmania - INT 74 (AUS 4074)
	Hobart to Davis	C	A + B	Annual re-supply of station by Aurora Australis and other vessel plus occasional tourist vessels Charts - Hobart AUS173 and 174 Davis – INT9032(AUS602) Cape Darnley to Tasmania - INT 74 (AUS 4074)
	Hobart to Mawson	C	A+B	Annual re-supply of station by Aurora Australis and other vessel plus occasional tourist vessels Charts Hobart AUS173 and 174 Mawson – AUS600 Cape Darnley to Tasmania - INT 74 (AUS 4074) Magnet bay to Cape Rouse – AUS449
	Hobart to Heard Island	C	A+C	Marine science voyage by Aurora Australis, customs patrol vessels plus occasional tourist and fishing vessels. Charts Hobart AUS173 and 174 Heard Island – AUS605 Cape Darnley to Tasmania - INT 74 (AUS 4074) Magnet bay to Cape Rouse – AUS449
	Fremantle to Heard Island	C	A+C	Marine science voyage by Aurora Australis, customs patrol vessels plus occasional tourist and fishing vessels.
	Hobart to Commonwealth Bay	C	A+C	Occasional visits by Aurora Australis, Astrolabe and occasional tourist vessels Charts - Hobart AUS173 and 174 Commonwealth Bay – AUS603
	Davis to Larsemann Hills	C	A+C	Occasional visits by Aurora Australis, Chinese re-supply vessel Xue Long and Russian re-supply vessels. No charts exist of the approaches to the Larsemann Hills
	Davis to Sansom Island	C	B+C	
	Hobart and Fremantle to Southern Ocean	C	A+C	Marine science voyages

Branch corridors and approaches

MSR	Name	Usage category	Survey category	Notes and INT chart coverage. Published and proposed
	Macquarie Island	C		AUS604
	Casey	C		INT9021 (AUS601)

	Davis	C		INT9032(AUS602)
	Mawson	C		AUS600
	Commonwealth Bay	C		AUS603
	Davis to Larsemann Hills	C		No chart coverage except at small scale. Sandjeford Bay to Cape Rundingen – AUS452 scale 1:500,000
	Davis to Sansom Island	C		No chart coverage except at small scale Sandjeford Bay to Cape Rundingen – AUS452 scale 1:500,000