



19th Conference of the IHO Hydrographic Commission on Antarctica

Report of the HPWG

Agenda item 07.3B

HCA-19, Venice, Italy (hybrid), 15-18 April 2024



IHO

Contents

International
Hydrographic
Organization

Hydrographic Priorities Working Group Update

- HPWG Web Page
- Status of Hydrographic Surveys
- Survey Activity
- Maritime Shipping Routes
 - Peninsula Review
 - South Orkney Islands
- Beacons Checklist
- HCA GIS Updates
- HCA Action 17/21 – Survey Data Exchange
- Zones of Confidence
- Actions to be considered by the HCA

HCA-19, Venice, Italy (hybrid), 15-18 April 2024



IHO

International Hydrographic Organization

- Basic Commission Documents
- HCA Letters
- **Hydrography Priorities Working Group**
- HCA19 (2024)
- HCA18 (2022)
- HCA17 (2021)
- HCA16 (2019)
- HCA15 (2018)
- Miscellaneous

Looking for something specific?

Start typing



HPWG Web Page

Hydrography Priorities Working Group

At its 4th Meeting (Kythnos, Greece, Sept. 2004), the HCA established a new Working Group: *HCA Survey Programme Working Group* with the specific aim is to establish co-operation and collaboration between hydrographic organisations and scientific institutions in hydrographic surveying in Antarctica. The WG was renamed *HCA Survey Prioritisation Working Group* at HCA-8 (Niteroi, RJ, Brazil, Oct. 2008), then ***HCA Hydrography Priorities Working Group (HPWG)*** at HCA-12 (Montevideo, Uruguay, Oct. 2012) with revised Terms of Reference. As a result, in addition to addressing hydrographic surveying in Antarctica, HPWG is also in charge of coordinating INT chart and ENC schemes. (Please see the [Scheming and Production of INT Charts and ENCs in Region M.](#))

Chair	Mr. Lee Truscott (Lee.Truscott@UKHO.gov.uk), United Kingdom
Membership	
in 2004	Argentina, Australia, Chile, Germany, Greece, South Africa, Spain, United Kingdom, USA, COMNAP (observer) and IAATO (observer).
since HCA-14, June 2016	The HCA Chair proposed that, because of its key coordinating role in the HCA, all HCA Members and Observers should be considered as participants in the HPWG in future (Decision&Action HCA14/16).
	Terms of Reference

Guidelines and Forms

The following documents have been developed and/or are being maintained by the HCA HPWG:

- [Guidelines for the collection and rendering of hydrographic data by Ships of Opportunity operating in the Antarctic Region](#)
- Form for [Collection and Rendering of Hydrographic Data](#), for use by ships' captains on Antarctic vessels.
- Form [Request for Bathymetric Data](#), for use by Hydrographic Office when preparing a new Edition or a new INT chart.
- Revised Survey Plan for Antarctica (version HCA-17, September 2021) - [Peninsula Survey Plan](#) for Antarctica

HPWG & Region M ICCWG Letters

No	Subject
2024	
e-Region M ICCWG CL 01/2024	IHO Hydrographic Commission on Antarctica 19. Region M ICCWG Workshop – Review of Schemed Charts

HPWG Chair reminded participants of the associated webpage and worked through relevant links

HCA-19, Venice, Italy (hybrid), 15-18 April 2024



IHO

Status of Hydrographic Surveys (C55)

International Hydrographic Organization

Antarctic Peninsula

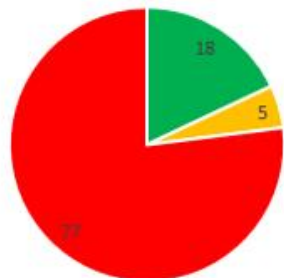
Antarctic

Antarctic 0-200m

Peninsula 0-50m

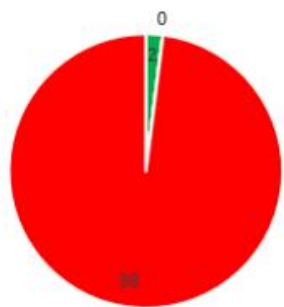


0-200m



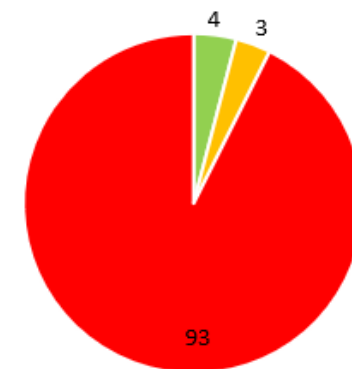
Adequate (%) Resurvey (%) No survey (%)

> 200m



Adequate (%) Resurvey (%) No survey (%)

C-55 Status of hydrographic surveying	CATZOC
Depth < 200m	
A Adequately surveyed	A1 A2 B for depth > 50m
B Re-surveyed required	B for depth < 50m
C Never systematically surveyed	C D U
Depth > 200m	
A Adequately surveyed	A1 A2 B
B Re-surveyed required	N/A
C Never systematically surveyed	C D U



Adequate Re-Survey No survey (%)

> 200m



Adequate (%) Resurvey (%) No survey (%)

HCA 19 C55s includes data from MS ENC's and survey information available to UKHO

HCA-19, Venice, Italy (hybrid), 15-18 April 2024

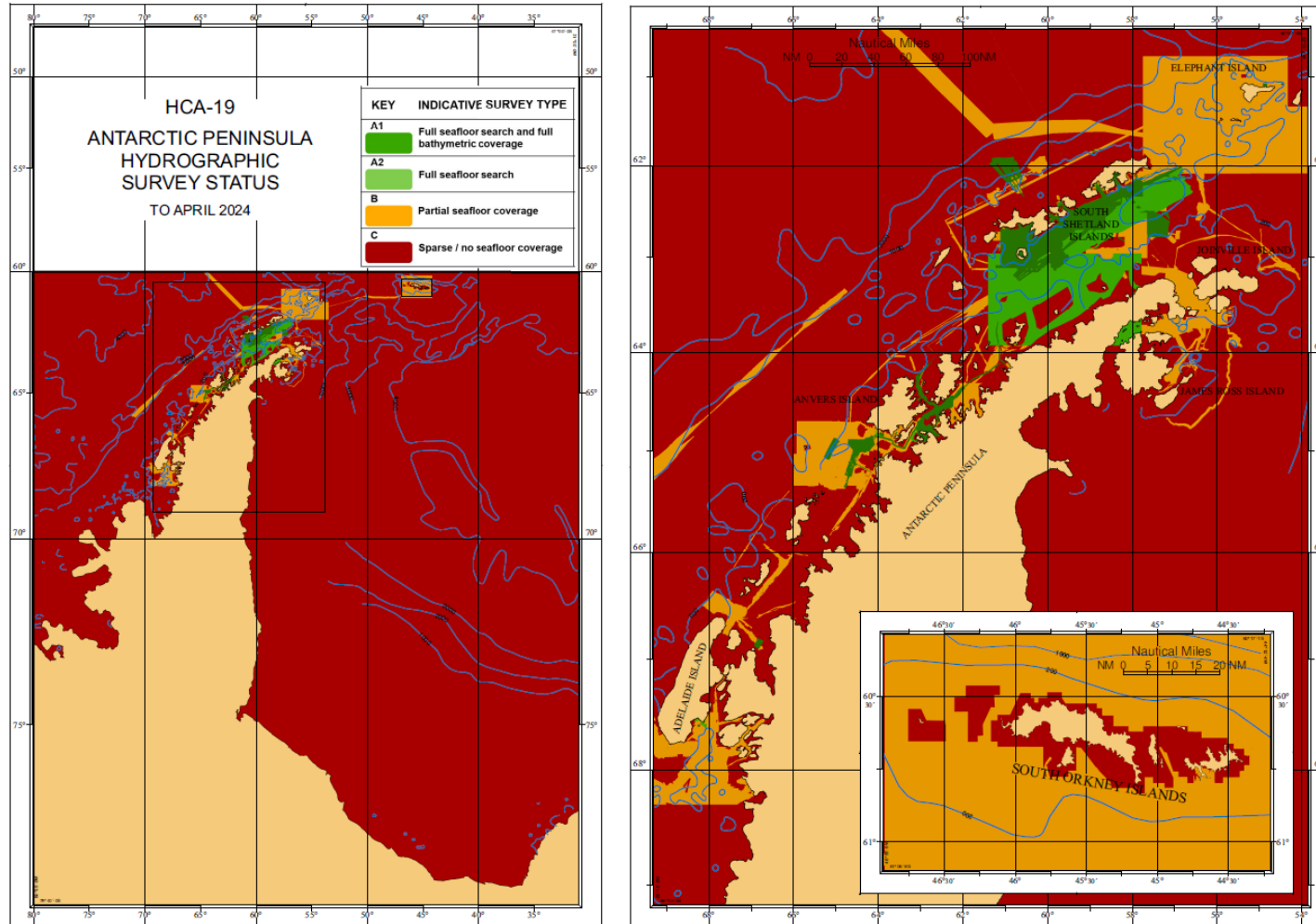


IHO

Status of Hydrographic Surveys

Antarctic Peninsula & South Orkney Islands Hydrographic Survey Status

International Hydrographic Organization



HCA-19, Venice, Italy (hybrid), 15-18 April 2024



IHO HCA Survey Activity

International
Hydrographic
Organization

SHN – Argentina

Since HCA18:

1. Dundee Island – Single-beam, February, 2023 – [INT 9100 \(AR\) & 9130 \(GB\) MSR A](#)
2. King George Island – Potter Cove – Single-beam, February, 2023 – [INT 9123 \(CL\) MSR Ai](#)
3. Greenwich Island – Yankee Hbr – Single-beam, February, 2023 – [INT 9112 \(GB\) MSR Ae](#)
4. Half Moon Island – Single-beam, March 2023 [INT 9121 \(ES\)](#) – [MSR Ae](#)

Planned 2024-25

1. Nothing to Report

Action: AR to provide UK as producer of INT 9112, Yankee Hbr survey (see action HCA19 HPWG 19/01)

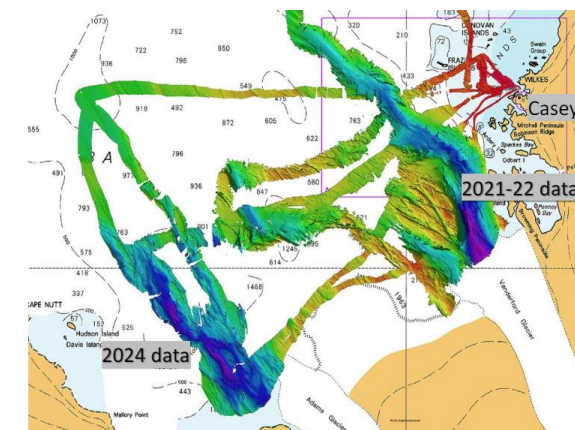
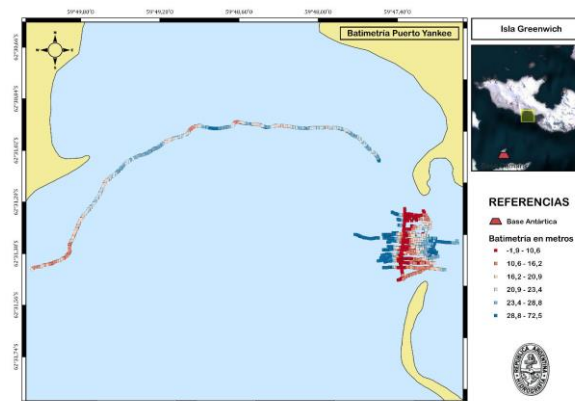
AHS - Australia

Since HCA18:

1. Approaches to Mawson – MBES, March 2023. – [INT 9036 \(AU\) MSR C](#)
2. Approaches to Casey – Adams Glacier – MBES January 2024 – [INT 9021 \(AU\) MSR A](#)
3. Cape Darnley – MBES February 2023 – [INT 9021 \(AU\)](#)

Planned 2024/25

1. Prydz Bay [INT 9030 \(AU\)](#)
2. Larsemann Hills [INT 9034 \(AU\)](#)
3. Mawson Station



HCA-19, Venice, Italy (hybrid), 15-18 April 2024



IHO

HCA Survey Activity

International
Hydrographic
Organization

DHN – Brazil

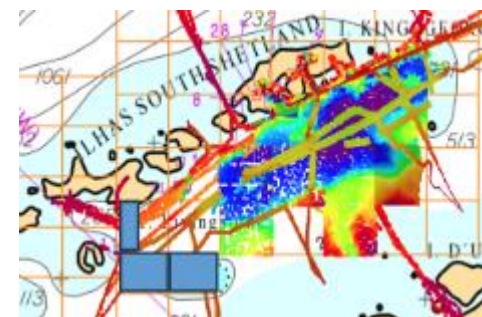
Since HCA18:

1. Bransfield Strait (South of Nelson Strait) – [INT 9151 \(BR & CL\)](#)
2. Survey metadata provided to HCA GIS

Planned 2024-25:

1. Further surveys in Bransfield Strait to support the production of INT 9151 & 9152.

Action: BR to coordinate surveys with Region M coordinator to avoid unnecessary duplication and delay of INT 9151 (see action HCA19 ICCWG 19/02)



SHOA – Chile

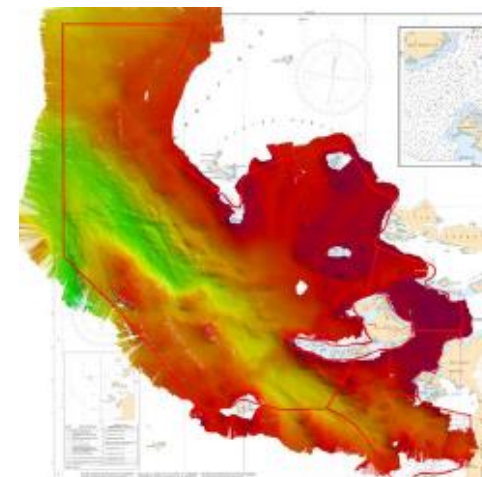
Since HCA18:

1. Greenwich Island, Discovery Bay – MBES March 2023/4 – [INT 9122 \(CL\)](#) [MSR Af](#)
2. Trinity Peninsula, Rada Covadonga – MBES March 2024 – [INT 9102 \(CL\)](#) [MSR G](#)
3. Maxwell Bay – MBES March 2023 – [INT 9123 \(CL\)](#) [MSR Ai](#)
4. Survey metadata provided to HCA GIS

Planned 2024-25:

1. Potential Further surveys in MSR 10, 12 Aa, 13, W & X to support new INT chart & ENCs

Action: CL to provide UK and EC survey for updating of overlapping INT products. Coordinate with HPWG chair for best approach to ensure consistency. EC to note action and coordination for INT 9129.(see action HCA19 ICCWG 19/03)





IHO

HCA Survey Activity

International
Hydrographic
Organization

DIMAR – Colombia

Since HCA18:

1. Gerlache Strait, MBES 2023/24 – [INT 9158 \(UK\) MSR 4](#)
2. Two Hummock Island MBES 2023/24 [INT 9165 \(UK\) MSR I](#)

Planned 2024-25:

1. Surveys in coordination with HCA requirements

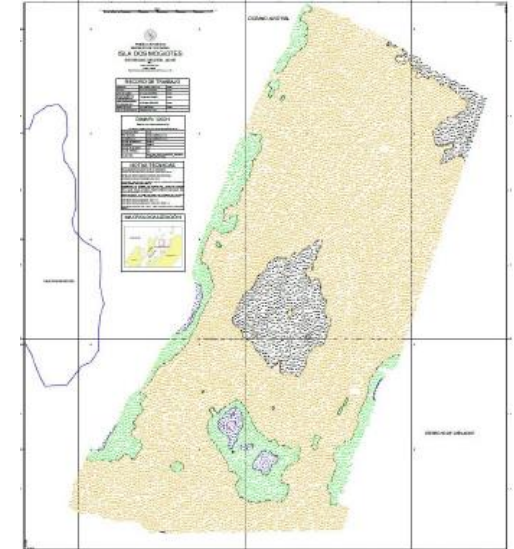
Action: CO to provide UK as producer of INT 9165, Gerlach Strait surveys (see action HCA19 HPWG 19/04)

MSA – China

No report

INOCAR – Ecuador

No report



HCA-19, Venice, Italy (hybrid), 15-18 April 2024



IHO HCA Survey Activity

International
Hydrographic
Organization

SHOM – France

Since HCA18:

1. Dumont D'Urville Base & Cap Prudhomme - [INT 9015 & 9016, 9017 \(FR\)](#)
2. Cap Denison – Port Martin – [INT 9016](#)

Planned 2024-25:

1. Nothing to report

BSH – Germany

No Report

INHO – India

No Report

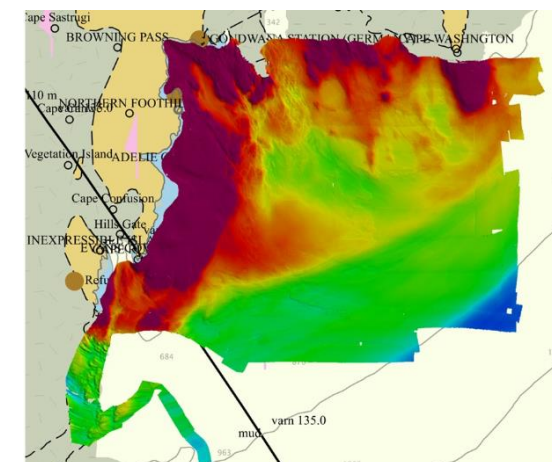
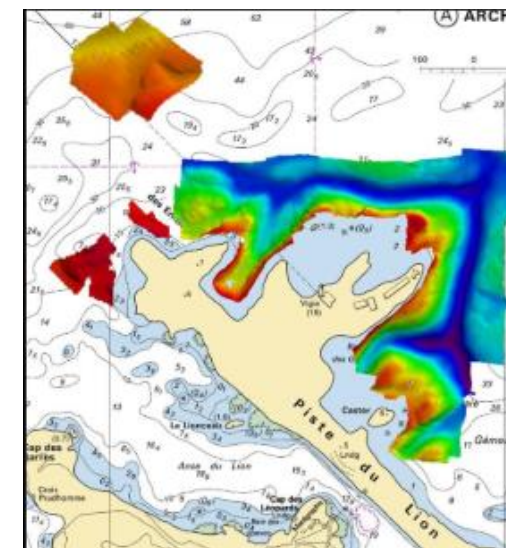
IHM – Italy

Since HCA18:

1. Ross Sea- MBES January 2023 – [INT 9000 & 9005 \(IT\)](#)
2. Ross Sea – MBES January 2024 – [INT 9000& 9004 \(IT\)](#)

Planned 2042-25:

1. Shallow water survey near Mario Zucchelli Station with a deployable system
2. Tethys Bay survey in cooperation with CNR



HCA-19, Venice, Italy (hybrid), 15-18 April 2024



IHO

HCA Survey Activity Update

International
Hydrographic
Organization

JHOD – Japan

Since HCA18:

1. Continued activity in Lutzow-Holm Bay – [INT 9045, 9046 & 9047 \(JP\)](#)

Planned 2024-25:

1. Lutzow-Holm Bay – [INT 9045, 9046, 9047 \(JP\) & 903 \(RU\)](#)

Republic of Korea

Since HCA18:

1. Maxwell Bay Entrance – MBES Dec 2022-Feb 2023 [INT 9123 \(BR & CL\)](#)
2. Survey metadata provided to HCA GIS

Planned 2024-25:

1. Further surveys in Ross Sea

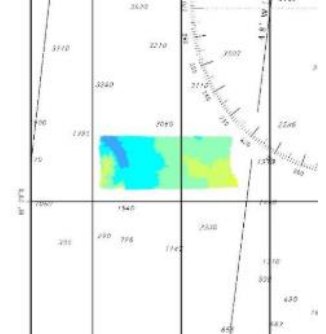
New Zealand

Since HCA18:

1. Nothing to report

Planned 2024-25:

1. Nothing to report



HCA-19, Venice, Italy (hybrid), 15-18 April 2024



IHO

HCA Survey Activity Update

International
Hydrographic
Organization

Kartverket - Norway

Nothing to report

DHN - Peru

Since HCA18:

1. Bransfield Strait

Planned 2024-25:

1. Nothing to report

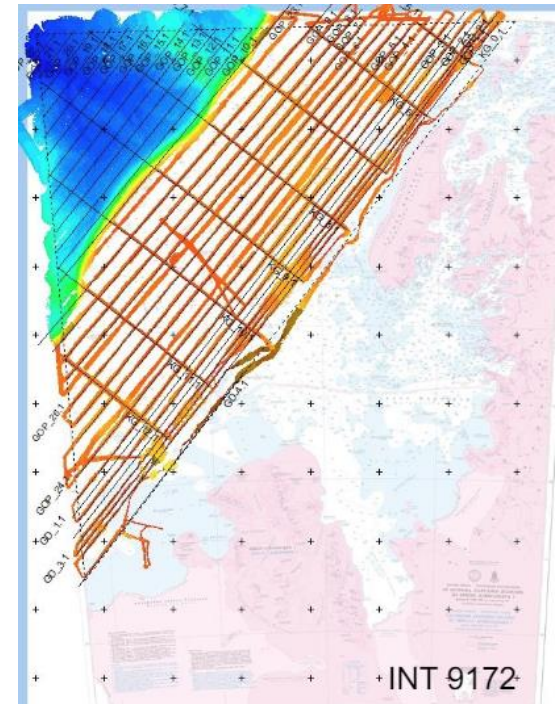
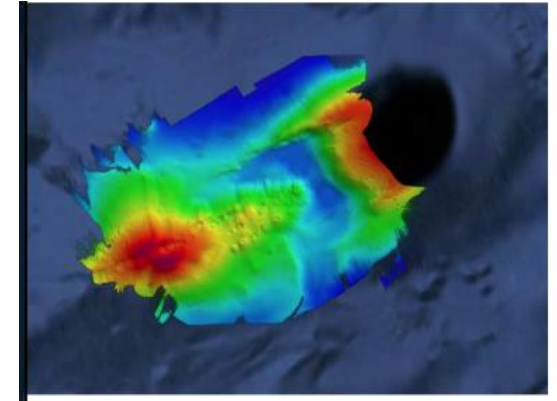
Action: PE to provide BR as producer of INT 9151, Bransfield Strait surveys (see action HCA19 HPWG 19/05). In addition, provide UK data for assessment against products and metadata for HCA GIS.

DNO – Russian Federation

Since HCA16:

Western approach to Adelaide Island - Scientific cruise 2020 – [INT 9162 \(CL\)](#), [INT 9172 \(RU\)](#) [INT 9163 \(UK\)](#) [MSR 13A, 13B](#)

Action: RU to provide UK as producer of INT 9163 surveys for product updating (see action HCA19 HPWG 19/06). In addition, using the HCA [form stack](#) provide survey metadata update.



HCA-19, Venice, Italy (hybrid), 15-18 April 2024



IHO

HCA Survey Activity

International
Hydrographic
Organization

SANHO - South Africa

Nothing to report

IHM - Spain

Survey metadata provided to HCA GIS

SHOD – Türkiye

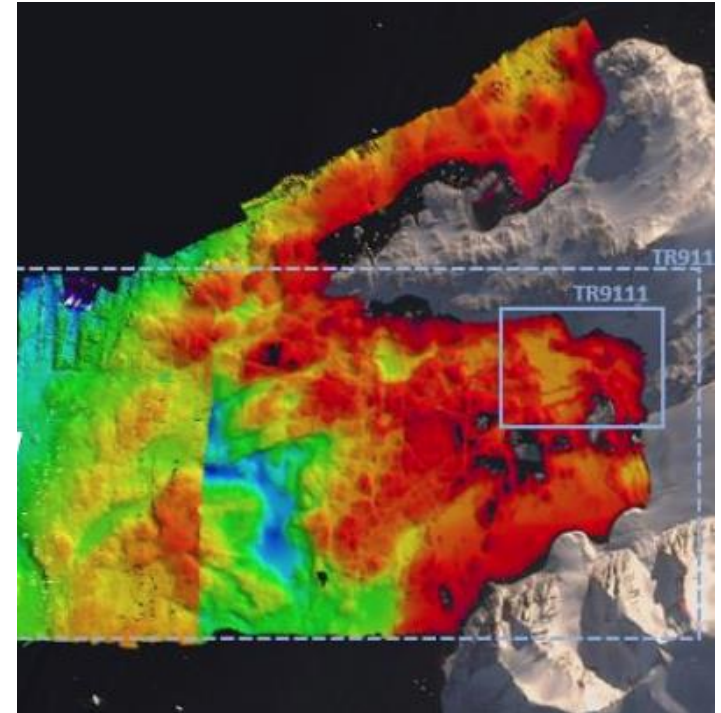
Since HCA18:

Horseshoe Island, Lystad Bay – MBES 2023 [New INT 9*** \(TR HCA-18\)](#)

Horseshoe Island, Sally Cove – MBES 2024 [INT 9109 \(UK\) MSR Bb](#)

Survey metadata provided to HCA GIS

Action: TR to provide UK as producer of INT 9163 surveys for product updating (see action HCA19 HPWG 19/07). In addition, using the HCA [form stack](#) provide survey metadata update.





IHO HCA Survey Activity

International
Hydrographic
Organization

UKHO – United Kingdom

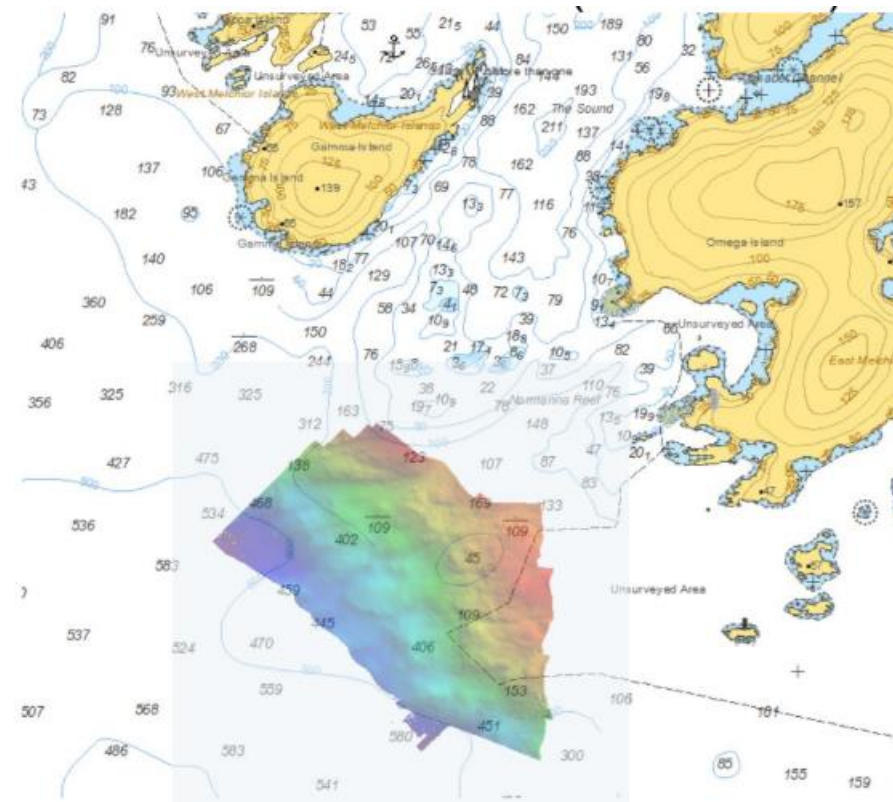
Since HCA18:

1. Buchanan Passage– [INT 9106 \(UK\)](#), [MSR 10A](#)
2. Pourquoi Pas Island – The Narrows – [INT 9136 \(UK\)](#), [MSR Av](#)
3. Approaches to Millard Island – [INT 9136 \(UK\)](#), [MSR Ab](#)
4. Melchior islands – [INT 9117 \(UK\)](#), [MSR Ma](#)
5. Penguin Island & Approaches – [INT 9112 \(UK\)](#), [MSR Ak](#)
6. Discovery Bay – [INT 9122 \(CL\)](#), [MSR A](#)
7. Pourquoi Pass Island – [INT 9163 \(UK\)](#), [MSR 11A](#)
8. Grandidier Channel – [INT 9122 \(UK\)](#), [MSR 07](#)

Planned 2024-25:

1. Detail of survey activities is yet to be agreed but will align with HPWG priorities and UK INT chart data requirements

Action: see action HCA19 HPWG 19/08



HCA-19, Venice, Italy (hybrid), 15-18 April 2024



IHO

HCA Survey Activity

International
Hydrographic
Organization

NGA/NOAA – US

Since HCA18:

1. McMurdo Station – [INT 9001](#)

Planned 2024-25:

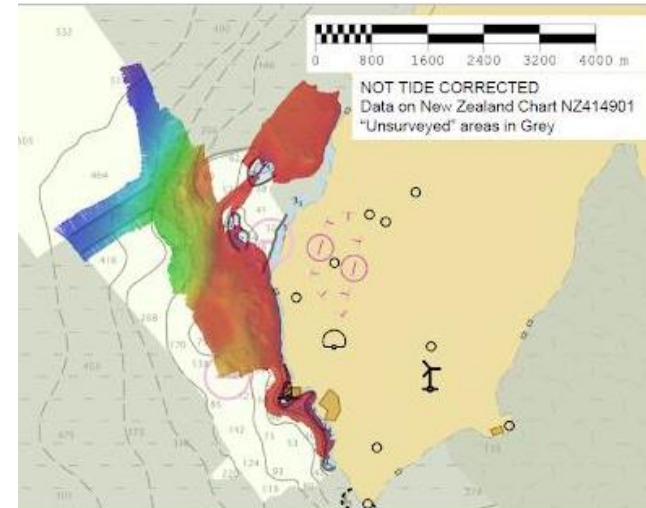
1. None planned

SOHMA - Uruguay

No report

SHN - Venezuela

Nothing to report



HCA-19, Venice, Italy (hybrid), 15-18 April 2024



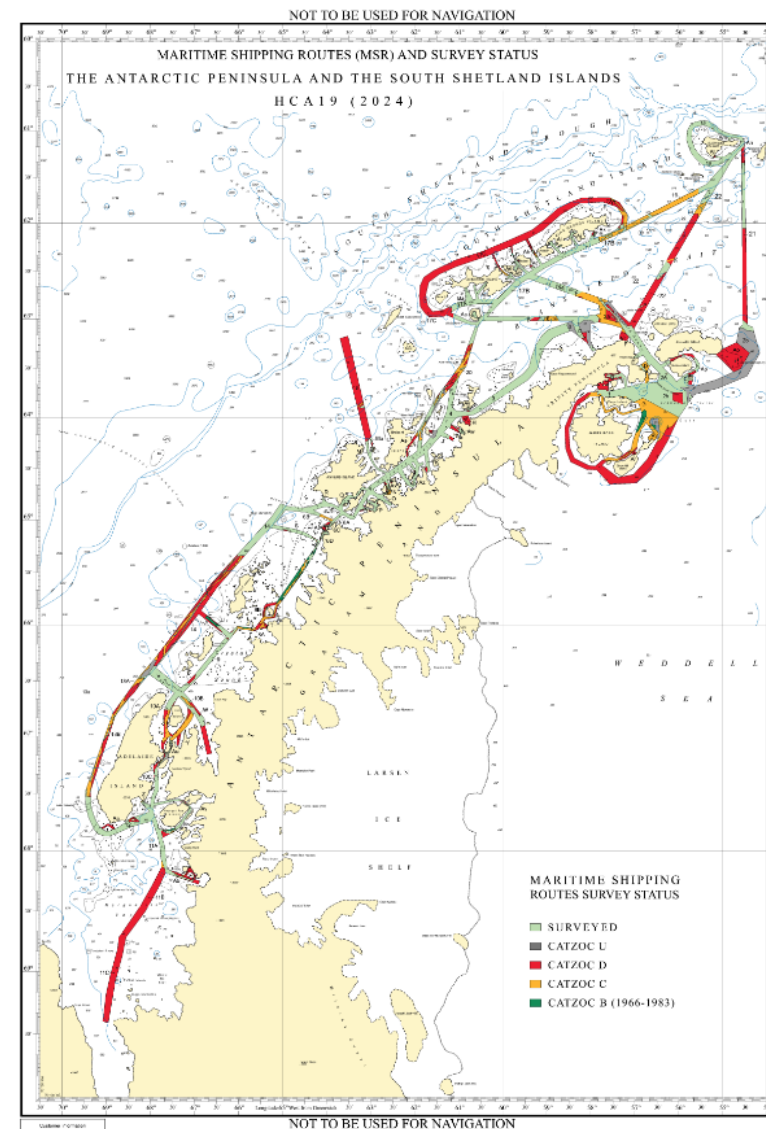
Peninsula MSR - Update

Background

- At HCA 17 the HPWG Chair reported on a review of the 78 Antarctic Peninsula MSRs and postponed amendments
- At HCA 18 the HPWG Chair reported on the completion of this work

HCA 19 Update

- A new additional complementary survey requirements file has been created which reflects the outstanding requirements for the Peninsula MSRs. This file is available in multi format and downloadable at agenda item HCA19-07.3A





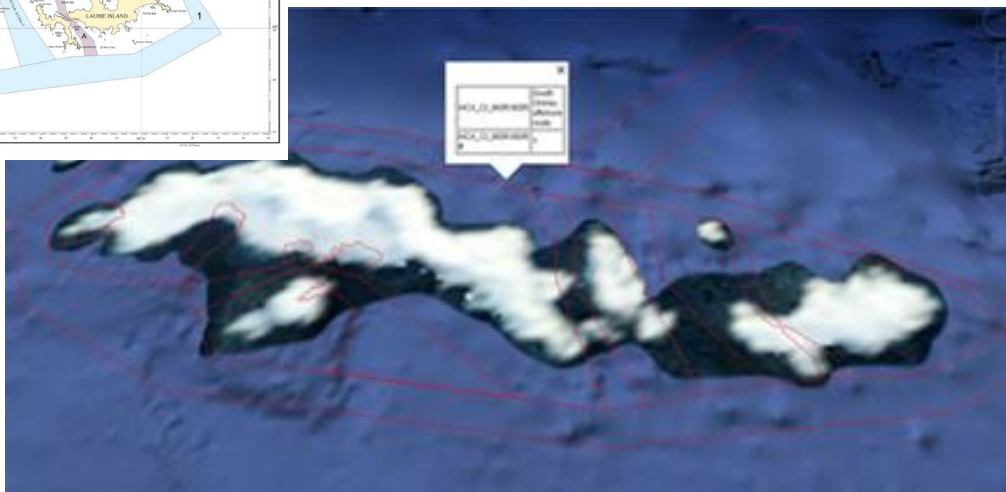
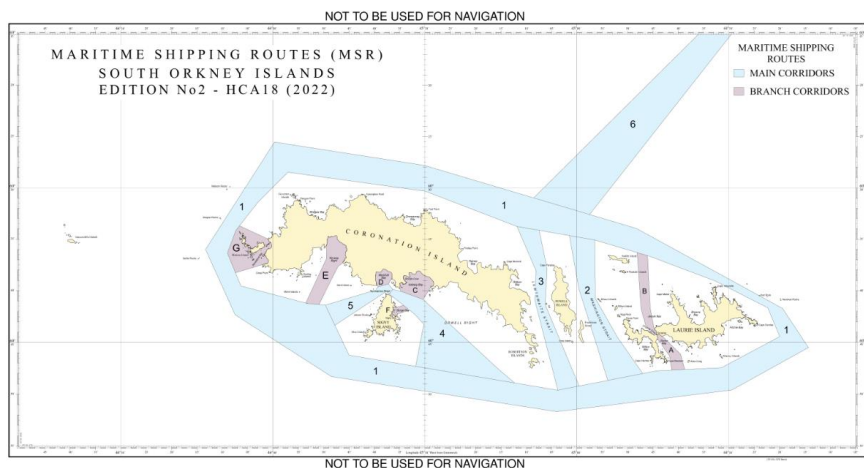
IHO

Peninsula MSR Review

International Hydrographic Organization

South Orkney Islands

- No modifications have been made to the HCA South Orkney Survey Plan due to capacity.
- The HPWG Chair reviewed in readiness for HCA20 as agreed at HCA18



HCA 18 - SOUTH ORKNEY ISLANDS SURVEY PLAN

Table of MSRs, base, 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 green. Indications of surveys completed appear in blue areas to be surveyed in red. Table includes data from HCA18 National Reports of AR, BR, CL, EC, FR, IT, JP, NZ, US & UK

1. SOUTH ORKNEY ISLANDS

Categories

Category	Usage
A	Frequent
B	Regular
C	Infrequent

Charted ZoC	
A	Adequately surveyed – full seafloor search
B	Modern survey – full seafloor search not achieved
C	Miscellaneous data – low accuracy
D	Unsurveyed
U	Unassessed data due to no ENC ZoC

1.1 Main Corridors (see diagram on last page for MSR references)

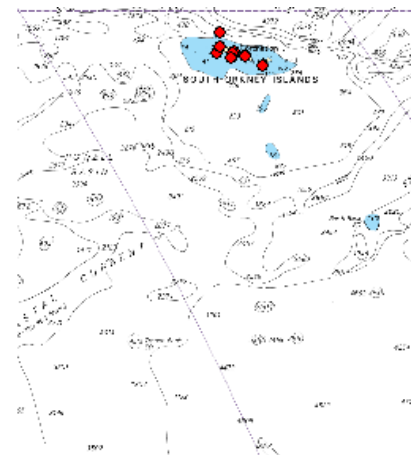
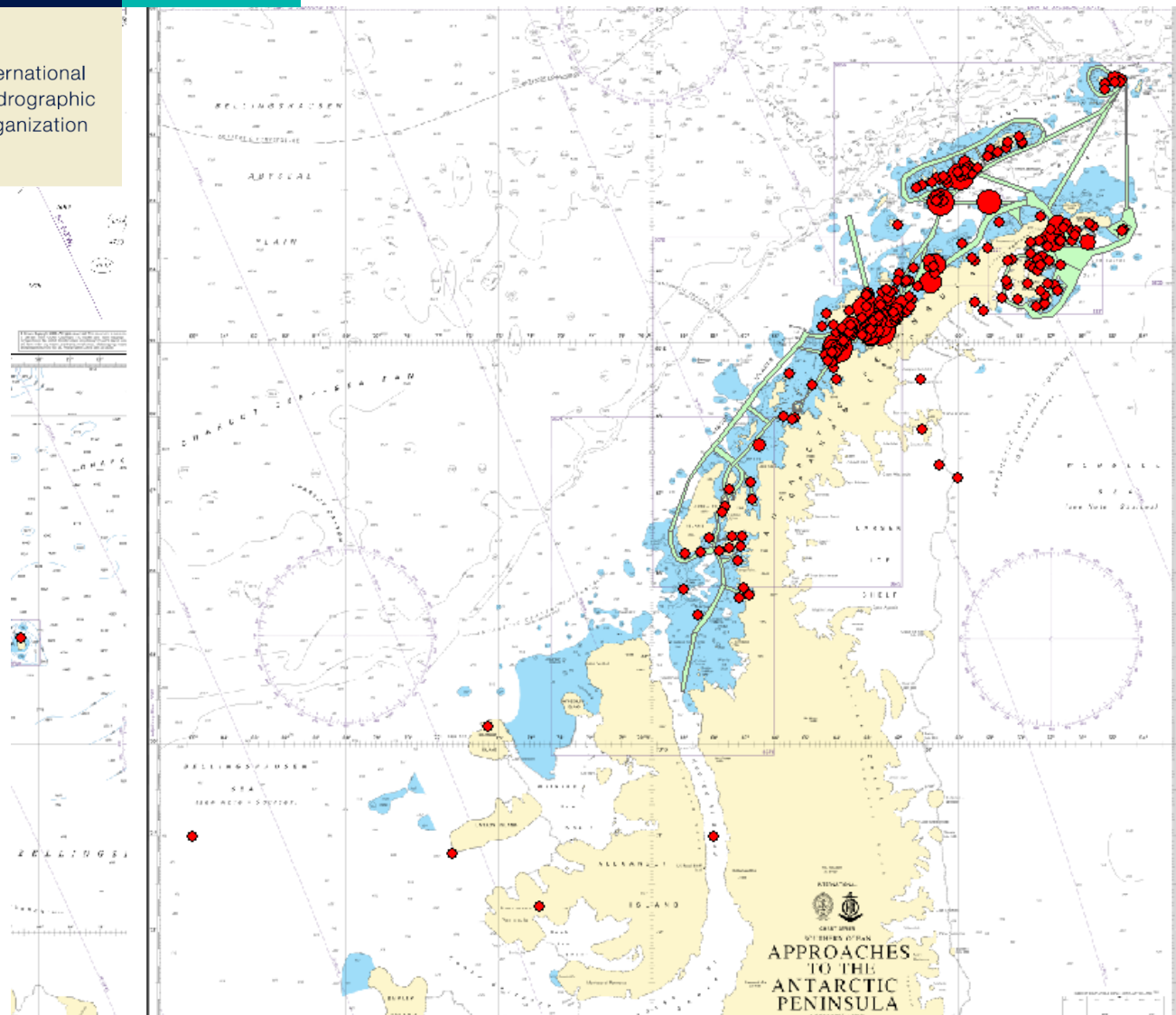
MSR	Name	Usage Category	Charted ZoC	INT Chart Coverage & Survey Information
1	South Orkney Offshore Route	C	B	INT 9140 (AR), 9141 (UK) Block surveyed by: AR 2001-2017 UK 2016-2017 (H1439B) UK 2007 (H1190) UK 1997 (H1719) UK 1964-66
2	Washington Strait	C	C	INT 9140 (AR) Block surveyed by: AR 1966-1981 BAS Cube Swathe 2001-2018
3	Lewthwaite Strait	C (NONE)	C&B	INT 9140 (AR) Block surveyed by: AR 1966-1981 AR 2001-2017 BAS Cube Swathe 2001-2018
4	SE Approaches to Signy Island	B	U&B	INT 9141 (UK), 9140 (AR) Block surveyed by: UK 2016-2017 (H1439B) – not included on INT 9141 UK 2007 (H1190) – not included on INT 9141 UK 2001 (H1908) UK 1997 (H1719) UK 1964 AR 2001-2017 BAS Cube Swathe 2001-2018 Surveys planned by UK 2022/23



IHO

MSR Tourists Visits 2021-22

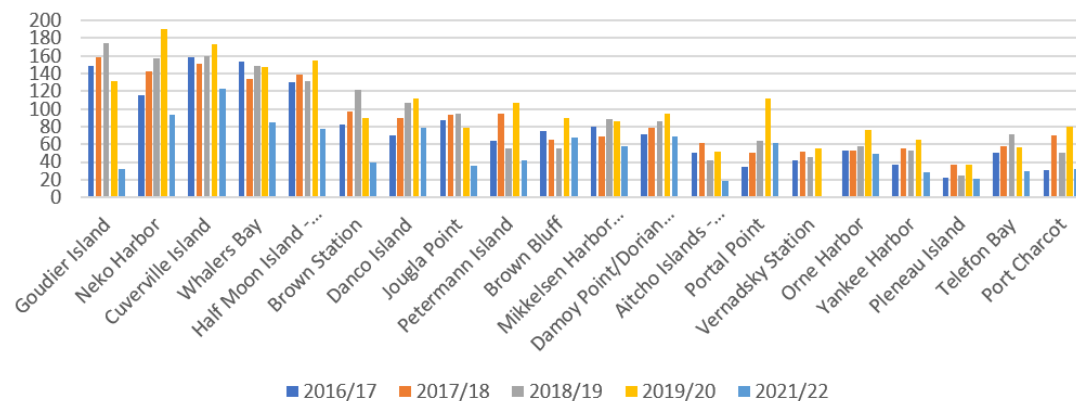
International Hydrographic Organization



23/24 IAATO data not available at time of presentation

Top 20 Most Visited Sites 2016-22 Seasons*

*2020-21 Season Excluded





IHO

HCA Peninsula Beacon Checklist

Updates to the Peninsula Beacon Checklist

- List has been maintained from information received and reissued for HCA19 (including GIS files)
- New (missed) structures have been added
- Support received from IAATO to clarify feature status/condition

Identifier	Area	Location	Description	Latitude	Longitude	INT Chart	Existence?	Position Checked?	Light Checked?	Photo?	Other Observations	Source (Year)
13K	Maxwell Bay	King Sejong	Beacon	62 13.60S	058 47.29W	9123 (CL 14211) 9124 (CL 14212)	Y				Red	James Clark Ross (2019)
13L	Maxwell Bay	Potter Cove	Light Fl.7s10m3M (G1387.7)	62 14.04S	058 39.28W	9123 (CL 14211) 9124 (CL 14212)				Y		L Truscott (2020)
13Ma	Maxwell Bay	Potter Cove - Jubani	Beacon	62 14.35S	058 40.79W	9123 (CL 14211) 9124 (CL 14212)				Y		L Truscott (2020)
13Mb	Maxwell Bay	Potter Cove - Jubani	Light Fl.4s18m6M (G1387.6)	62 14.40S	058 40.73W	9123 (CL 14211) 9124 (CL 14212)	Y			Y		L Truscott (2020)
13N	Maxwell Bay	Harmony Cove	Beacon	62 19.66S	059 09.99W	-						
13O	Maxwell Bay	Armonia Point	Beacon	62 18.35S	059 14.18W	-	Y		NA	Y	RW bands. Racon inoperative	A Willett (2020)



HCA-19, Venice, Italy (hybrid), 15-18 April 2024



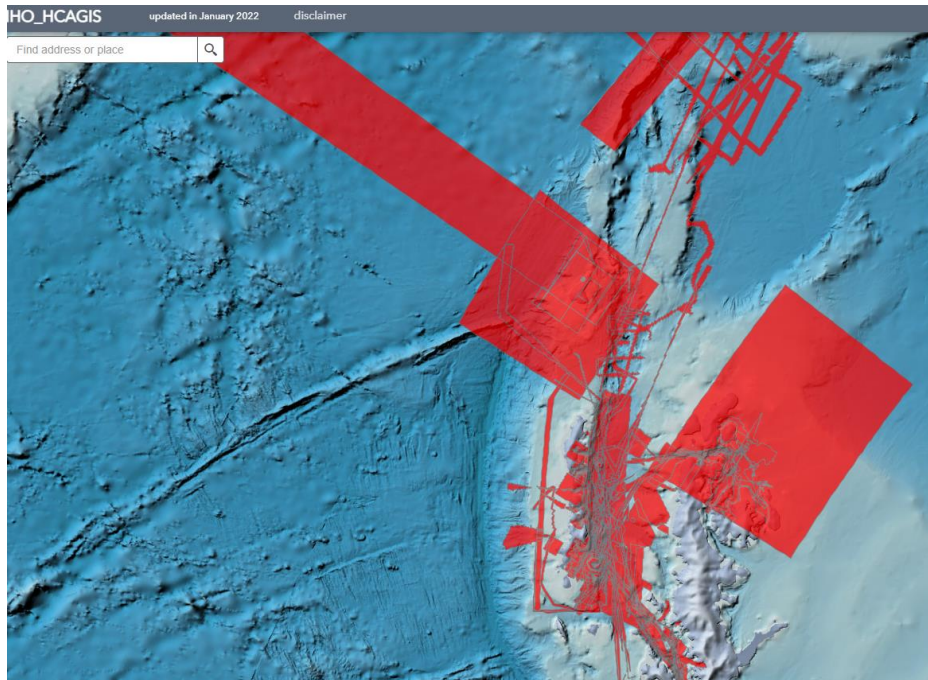
IHO

HCA GIS Update

International
Hydrographic
Organization

Updates the HCA GIS

- Survey limits from BR, RoK, Spain, Türkiye & UK have been added to the HCA GIS since HCA18
- Chair expects to receive full metadata information from CL, CO & UY.
- The HCA GIS should be used to identify surveys for compilation and future survey planning to avoid duplication of effort.



Use this link to view the HCA GIS (polar stereographic projection):

<https://iho.maps.arcgis.com/apps/webappviewer/index.html?id=664ba846acc04f36a4326fbcd19b51a0>

HCA-19, Venice, Italy (hybrid), 15-18 April 2024



IHO

HCA GIS Update

International Hydrographic Organization

Extracting Data

- Data can be extracted and viewed via the IHO Open Data Website



Explore your data



2



International Hydrographic Organization

Search: []

Filters: **Data** | Documents | Apps & Maps

1 - 20 of 26 results

Content Type	Tags	Last Updated	Rows
<input type="checkbox"/> Feature Layer <input type="checkbox"/> Feature Service	HCA_GIS, HCA GIS data	Type: Feature Layer Last Updated: 9 February 2022	454 Tags: HCA_GIS, HCA GIS data
<input checked="" type="checkbox"/> SurveyArea poj@iho.int	HCA_GIS, HCA GIS data	Type: Feature Layer Last Updated: 9 February 2022	29 Tags: HCA_GIS, HCA GIS data

3

Data download

In order to download the GIS data, please visit [the IHO Open Data website](#).

1

International Hydrographic Organization

IHO HCAGIS

Private Member | Private Organization

Summary: HCA_GIS, HCA GIS data

Details: Map Feature Service, 9 February 2022 Date Updated, 3 May 2018 Published Date, Public Anyone can see this content, No License Provided Request permission to use, Relevant Area

Layers: SciBase, TideRec, Beacon, MaritimeShippingRoute

You may be interested in: TideRec, schemed berthing

I want to... View Data Source, Open in ArcGIS Online

4

HCA-19, Venice, Italy (hybrid), 15-18 April 2024



IHO

HCA GIS Update

International
Hydrographic
Organization

Viewing Data

In ArcGIS Online:

Video removed to reduce file size, refer to tutorial video: <https://iho.int/en/hca-miscellaneous>

HCA-19, Venice, Italy (hybrid), 15-18 April 2024



IHO

Survey Data Exchange

International
Hydrographic
Organization

HCA17/21

HCA 18 agreed the following data exchange format:

- Caris Spatial Archive (CSAR) and ASCII xyz format
- A combined surface in CSAR and ASCII xyz format
- The CATZOC polygon shapefile
- The release statement (covering permission of use)



IHO

HCA Antarctic ZoC Update

International
Hydrographic
Organization

At HCA 18 the HPWG Chair highlighted to the WG inconsistencies regarding the application of ZoC.

Challenges for Region M

- Reducing the use of ZoC 'U'
- Assigning ZoC to legacy survey data
- Inconsistent & incorrect application of ZoC to surveys (between and amongst producers)
- Different interpretation of ZoC & S44 by producers

Effect of Incorrect ZoC

- Impact on decision making by mariner based on underlying data
- Affects C55 calculation

See action HCA19 HPWG 19/10

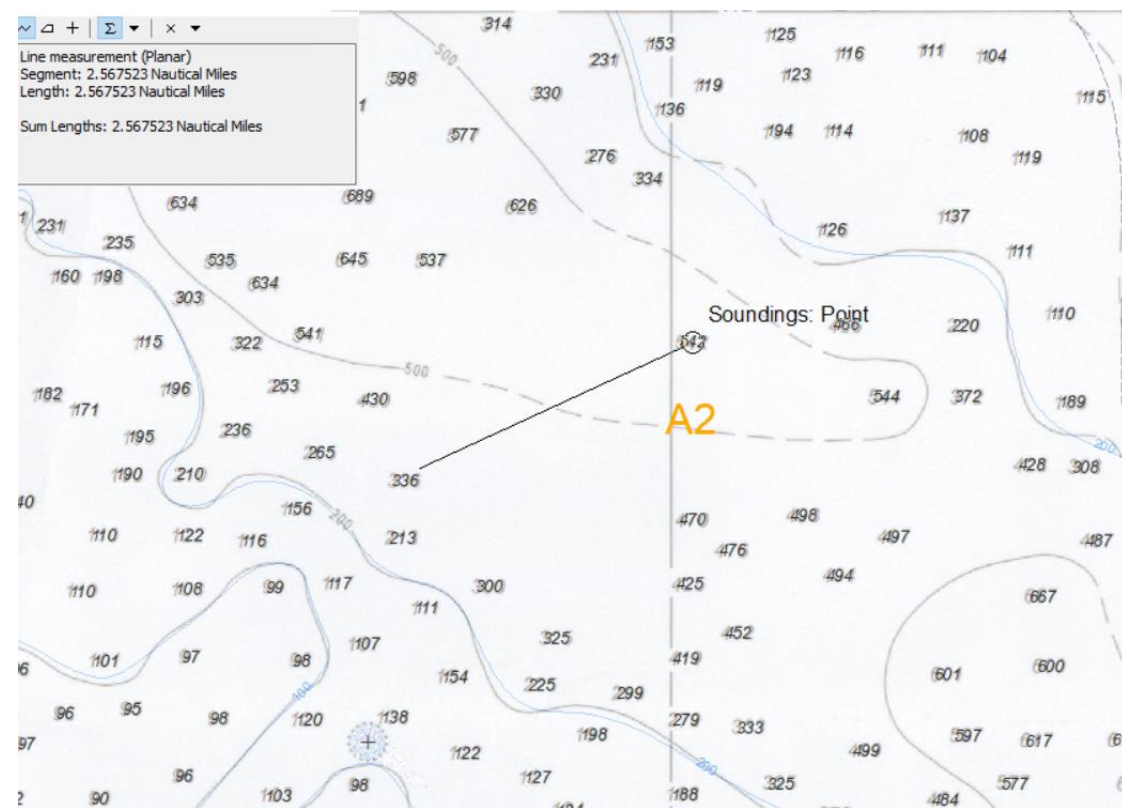
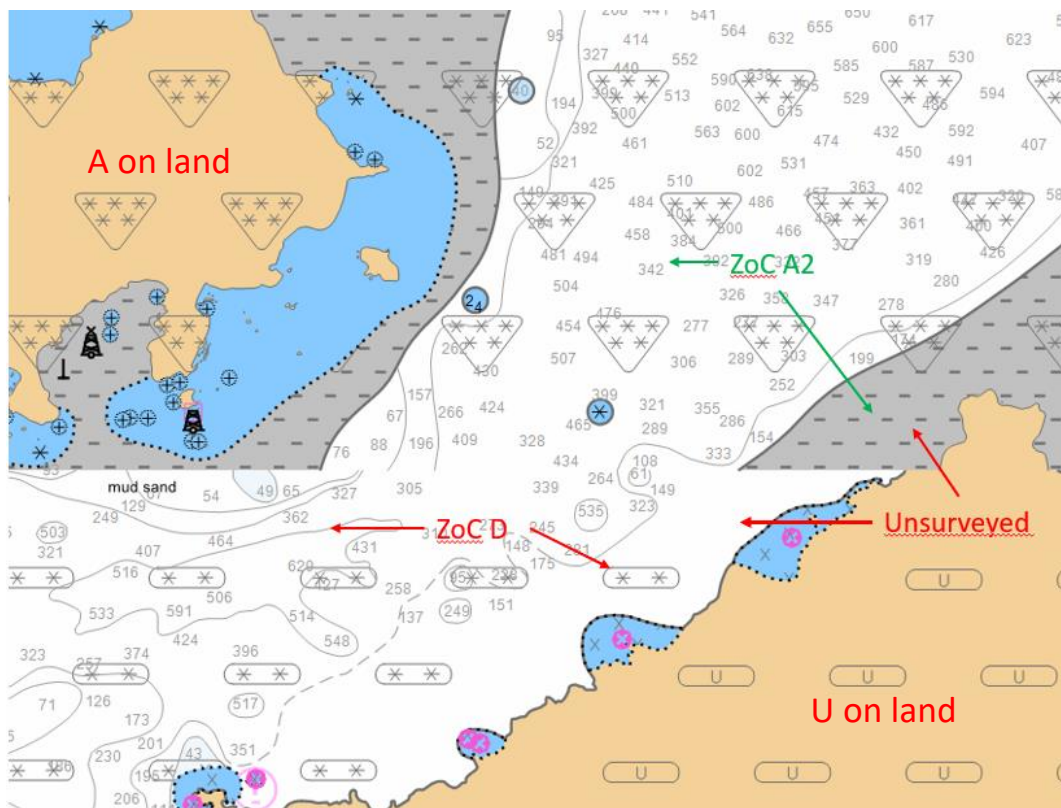


IHO

HCA Antarctic ZoC Update

International Hydrographic Organization

Region M WENDWG-14 report highlighted several examples of inconsistent ZoC application.



HCA-19, Venice, Italy (hybrid), 15-18 April 2024



IHO

Actions to be Considered by the HCA

International
Hydrographic
Organization

Members are invited to:

- Note the use of form HCA12-07 E for bathymetric data requests
- Refer to the MSR documents for survey planning
- Note the discoverability of data within the HCA GIS and are encouraged to contribute
- Review and update ZoC inconsistencies that have a negative impact on user navigational decision making – contact Chair
- Continue to work with Members on the coordinated data acquisition and sharing

- Note the report

HCA-19, Venice, Italy (hybrid), 15-18 April 2024