



# 21<sup>st</sup> Meeting of the North Indian Ocean Hydrographic Commission

National Report by

**Commodore Stewart Dunne**  
**Australian Hydrographic Office**



International Hydrographic Organization  
*Organisation Hydrographique Internationale*

North Indian Ocean Hydrographic Commission



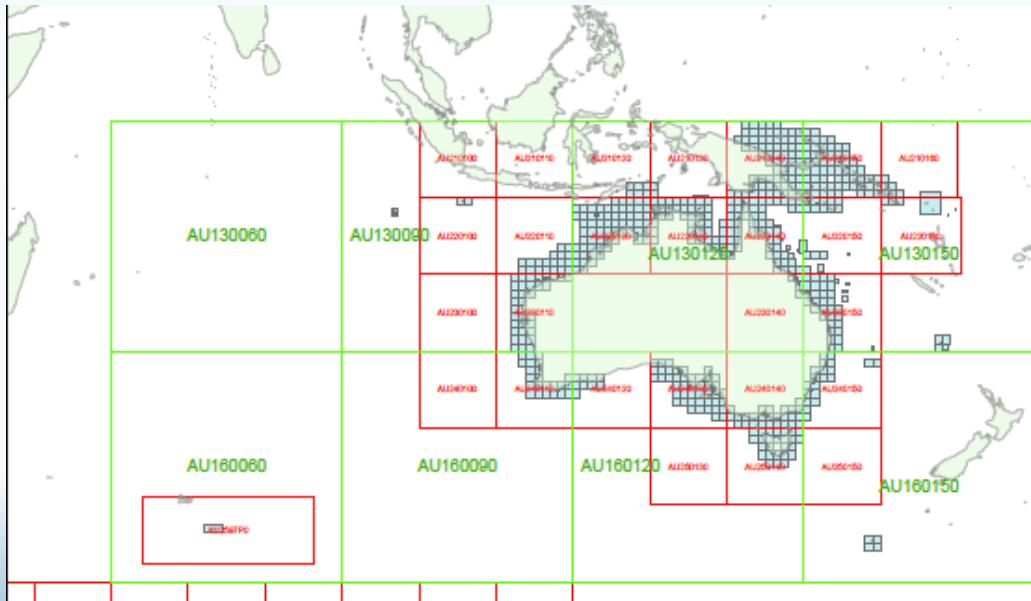
# Main achievements during the year

- New editions of INT Chart 4714
- New edition of usage 1 cell AU130090
- New emphasis on external engagement with a regional focus
  - Capacity building
  - Timor Leste
- Maturing of the HydroScheme Industry Partnership Program
- Operationalising Project Muru
- LinkedIn account



# Progress on charting

- Current Status of Australia ENC Production in Region J: Australia produce two usage 1 cells within region J
  - AU130060 – Mid Indian Ocean – Ed.2 Update 1 published Oct 2020
  - AU130090 – North West Approaches – Ed5 Update 3 – Published Aug 2022



## Current Portfolio

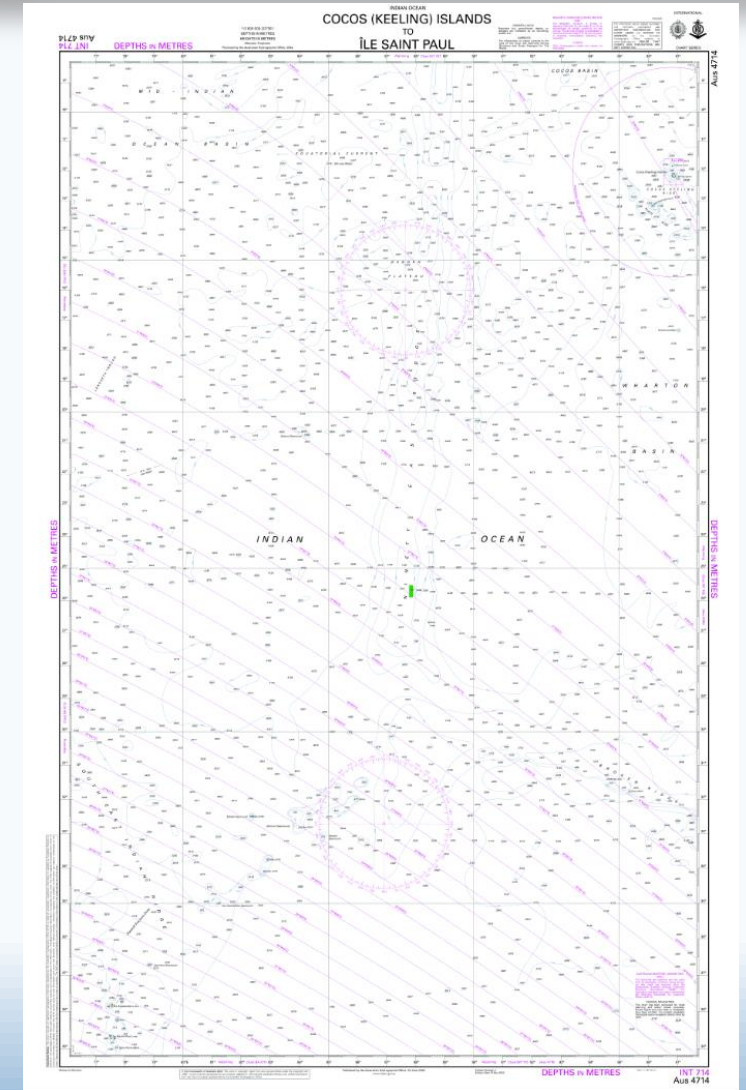
The total portfolio as of 1 August 2022 includes:

Nation	Paper Charts	ENC	Total
Papua New Guinea	80	168	248
Solomon Islands	17	43	60
Australia	287	697	988
<b>Total</b>	<b>384</b>	<b>908</b>	<b>1292</b>



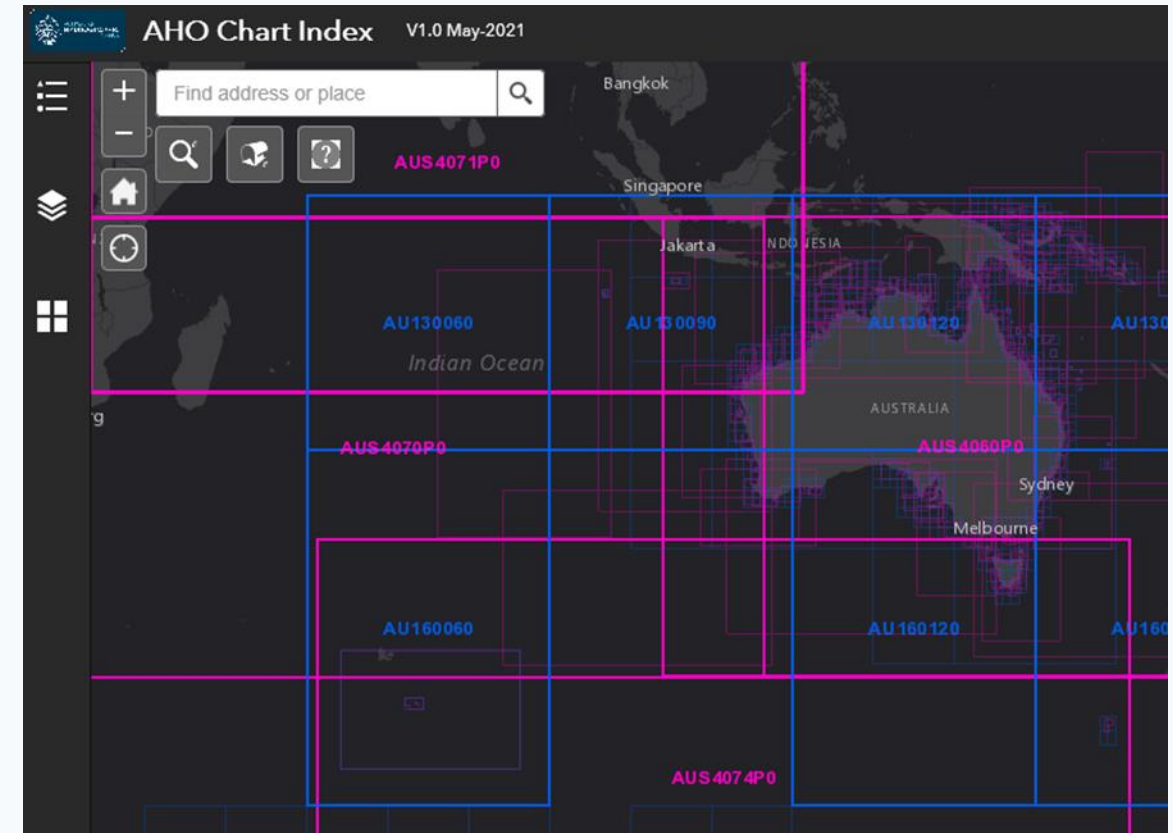
# Progress on charting

- Current Status of Australia Paper Production in Region J: Australia produce one INT chart within region J.
  - AUS4714 (INT714) – Cocos (Keeling) Islands to Ile Saint Paul– Ed.5 published 18 Mar 2022
  - New Edition of INT 714 compiled from updated source and to S4 specifications.



# Progress on charting

- On 15 October 2021, the AHO released a new web service to facilitate the discovery of our charting products (paper charts and ENC) in an easy to use graphical interface that has the option to display ENC content as background.
- See [AHO Chart Index \(hydro.gov.au\)](https://hydro.gov.au)



# Chart Rationalisation

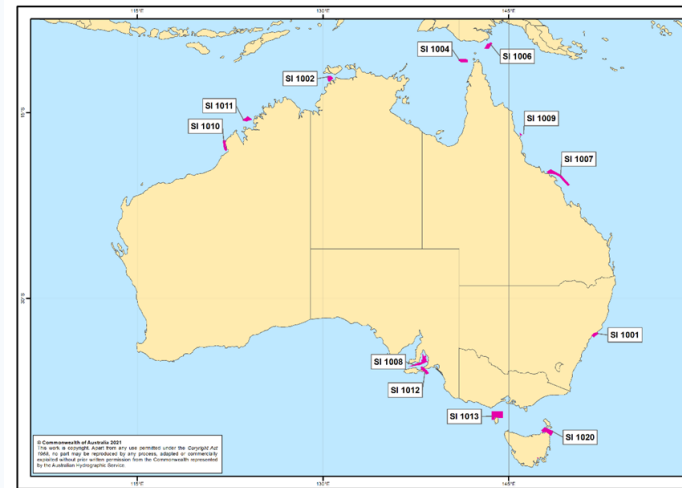
- The AHO is currently in the process of withdrawing some of the multiple large scale port paper charts and 1.5 million INT charts, retaining full detail in the ENC products only.
- The largest scale paper chart offered in those areas will be adequate to serve as ECDIS backup and it will show the limits of the areas where additional detail exists in ENCs. It will still allow mariners to plan pilotage, continue their navigation as planned or to deviate to a waiting area (open sea or anchorage) or pilot boarding place
- To date 103 Australian paper nautical charts have been withdrawn throughout 2021/2022.
- The list of coastal and large scale charts for withdrawal was released to the public via Notice to Mariners on 7 February 2020.
- Australia intends to cease production of paper charts by end of 2025.



# HydroScheme Industry Partnership Program (HIPP)

- The AHO is in the second year of implementing the HIPP.
- HIPP fundamentally consists of a rolling annual survey program contracted out to a preselected panel of Hydrographic Survey companies who bid for tendered work. Each annual program is referred to as a HydroScheme. HydroScheme 2020 is complete, HydroScheme 2021 data is being applied to nautical charts and products, and HydroScheme 2022 contracted hydrographic surveys are currently underway.
- Details of current and past HydroScheme activities are published on the AHO website at [www.hydro.gov.au/NHP/](http://www.hydro.gov.au/NHP/) as Story Maps.

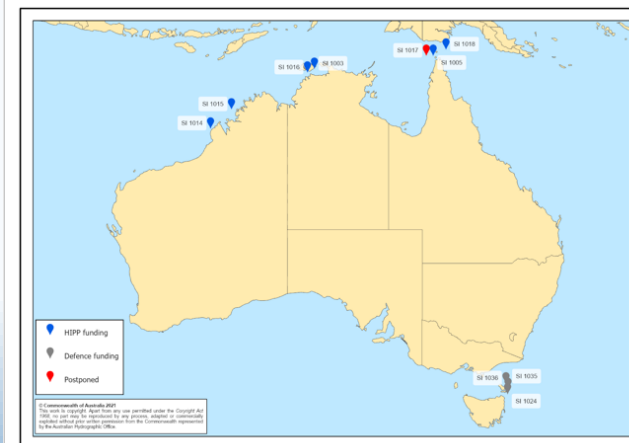
# HydroScheme 2020



15 survey projects issued to  
HIPP Panel

- 12 Projects completed
- 3-year tide buoy project commenced in Torres Strait to develop Hydroid

## HydroScheme 2021



7 survey projects issued to HIPP  
Panel

- 3 completed
- 3 underway (processing)
- 3 additional Defence projects Bass Strait



International Hydrographic Organization  
*Organisation Hydrographique Internationale*

North Indian Ocean Hydrographic Commission

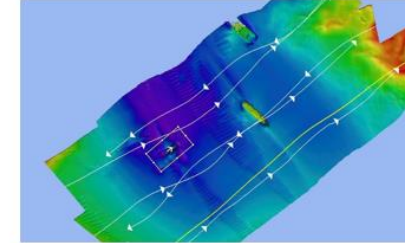


# HydroScheme Industry Partnership Program (HIPP)

## HIPP Objectives

- ☐ To obtain full, high quality EEZ bathymetric coverage by 2050
- ☐ To link chart datum (typically LAT) to the national ellipsoid through development of AusHydroid by 2050
- ☐ Integrate HIPP activities into the national plan for MBES Bathy Data Acquisition
- ☐ Provide environmental data to baseline Australia's marine estate
- ☐ Support hydrographic survey of remote locations (Australian Antarctic Territory, Heard & McDonald Is)
- ☐ Support development of an organic tertiary hydrographic education program
- ☐ Build the hydrographic industry in Australia
- ☐ Support regional capacity building programs
- ☐ Adhere to intent of the Australian Governments Data Availability and Use Policy

## HIPP Project Management & Client Rep Visits



**HIPP**  
HydroScheme Industry Partnership Program



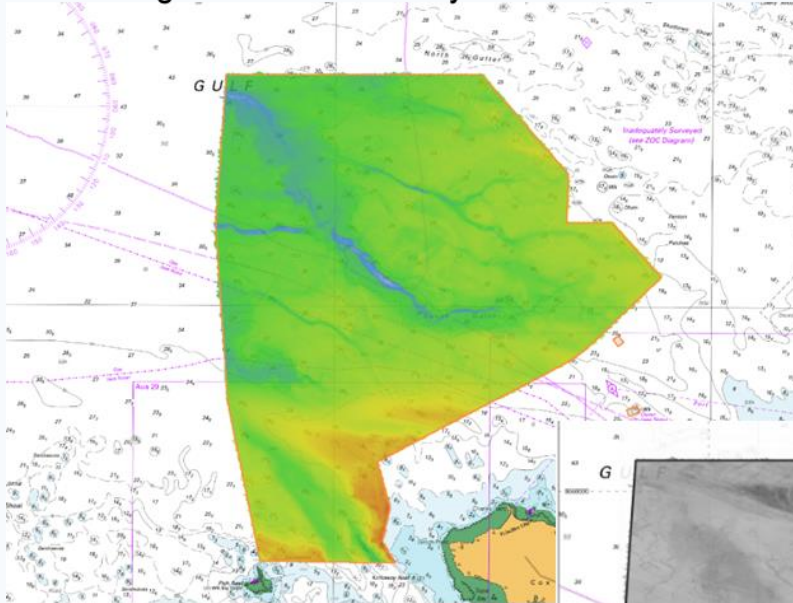
International Hydrographic Organization  
*Organisation Hydrographique Internationale*

North Indian Ocean Hydrographic Commission

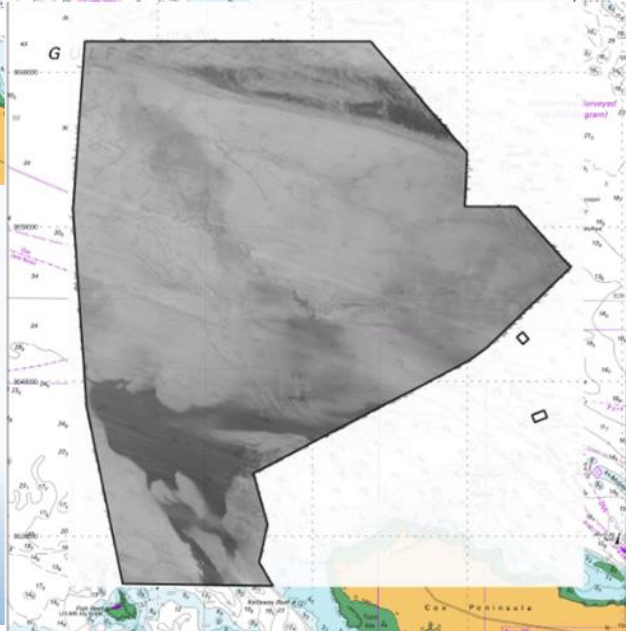


# HIPP Products – foundation data collect

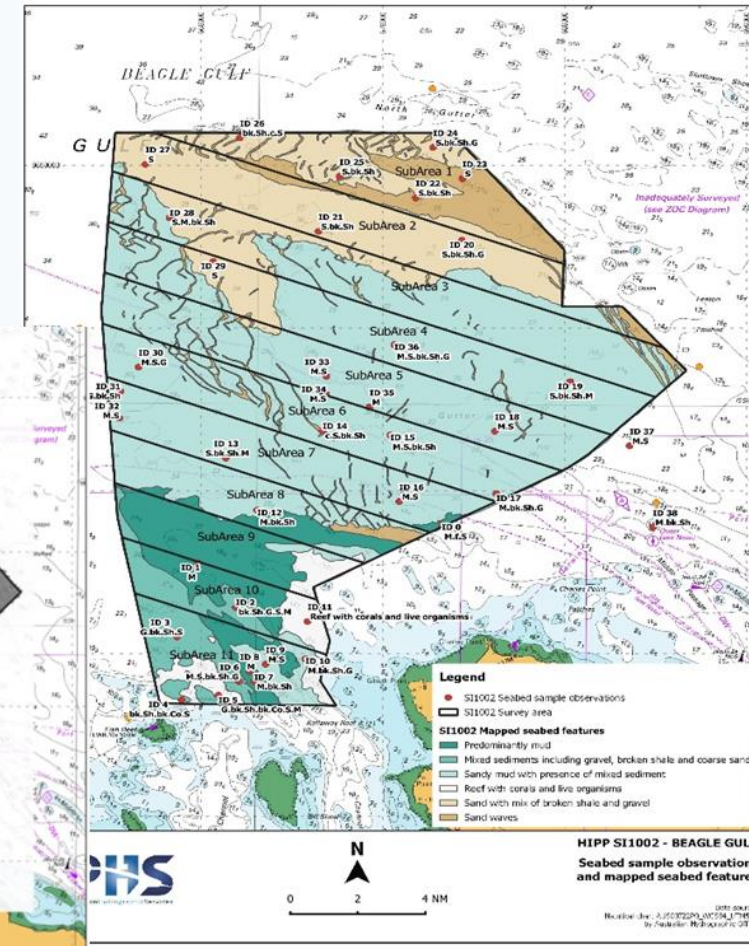
High Resolution Bathy Model



Full Backscatter



HIPP SSDM Geodatabase

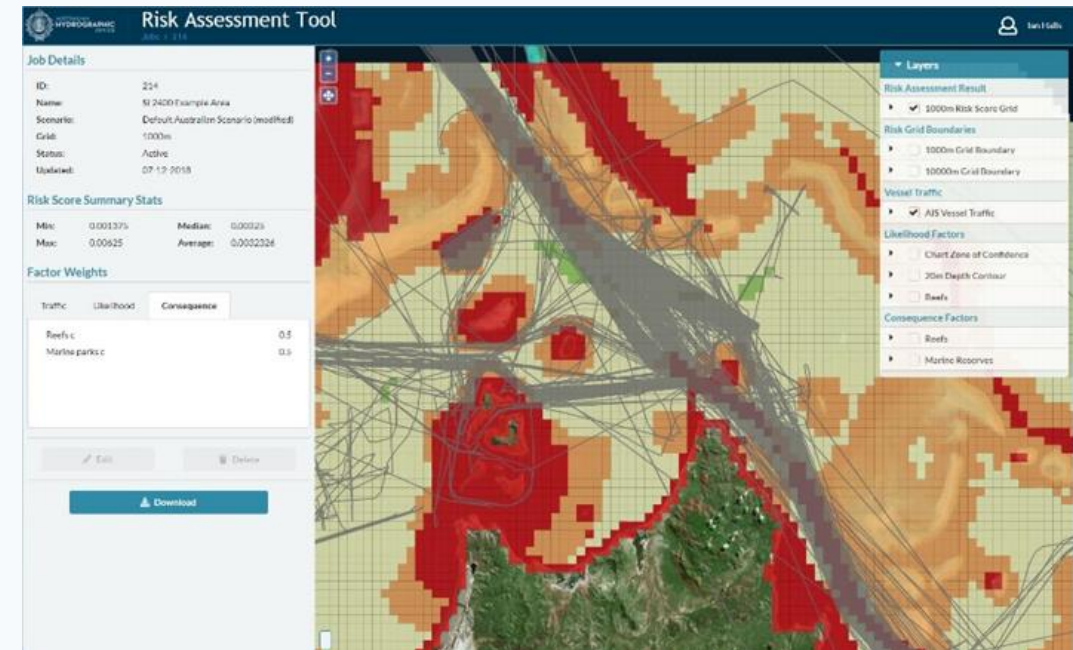


# RISK ASSESSMENT TOOL (RAT)

## Survey Planning Risk Assessment Tool

The AHO continues to develop a Risk Assessment Tool based on the methodology adopted by LINZ. This operates on an Amazon Web Service cloud instance and was first employed during the survey planning process for HydroScheme21.

It uses AIS data (supplied by AMSA) and geospatial data overlays to output a graphic risk display (see image example). The user has the flexibility to alter Traffic, Likelihood and Consequence weightings to develop Use Case Scenarios. Further development work is underway to improve the way AIS traffic data influences the output and to extend coverage to include Antarctica and Australian offshore territories.



# Capacity Building

- **Maritime Geospatial Training Centre (MGTC)**

The Maritime Geospatial Training Centre (MGTC) is located at HMAS Penguin in Sydney on the North Shore. MGTC provides training courses in Hydrographic surveying for officers and sailors from Australia and the region under the Defence Cooperation Program

In 2021 the advanced level H2 course consisted of students from Australia (11), New Zealand (2), Malaysia (1) and Fiji (1).

MGTC is currently running two courses simultaneously - a basic and advanced level course. The Basic course is graduating on 10 Aug 22 with Australian (9) and Fijian (2) students.

The Advanced course commenced a month ago and includes Australians (12), Fijian (1) and Indonesian (1) student (graduating 01 Dec 22).



Intermediate Course held earlier in the year (2022)



# Capacity Building

- **Fiji Hydrographic Service Technical Visit**

In March 2022 a contingent of AHO personnel conducted a technical assessment of the Fiji Hydrographic Service (FHS) capability. AHO representatives met with FHS staff to determine baseline capability assessment, benchmark for informing future capacity building programs and assist FHS to meet future hydrographic and charting needs including future development.



Technical Visit team – AHO/FHS



# Participation in IHO Working Groups

	Meeting	Chair/Vice Chair	Member/Associate/Observer
	Council		M
HSSC	Hydrographic Services and Standards Committee		M
NCWG	Nautical Cartography Working Group		M
ENCWG	ENC Working Group		M
DQWG	Data Quality Working Group		M
MSDIWG	Marine Spatial Data Infrastructure Working Group		M
HSPT	S-44 Hydrographic surveys Project Team		M
TWCWG	Tidal, Water Level and Currents Working Group		M
WEND	World-Wide Electronic Navigational Chart Database		M
NIPWG	Nautical Information Provision Working Group		M
WWNWS-SC	World-Wide Navigational Warnings Service Sub-Committee		M
ABLOS	Advisory Board on the Law of the Sea		O
CSBWG	Crowd Sourced Bathymetry Working Group		O
S-100	S-100 Working Group		M
S-101	Project Team	Vice Chair	M
S-104	Development Group		M
S-111	Development Group		M
S-121	Development Group		M
S-129	Development Group		M
S-412	Development Group		M
HCA	HCA Hydrographic Commission on Antarctica		M
NIOHC	North Indian Ocean Hydrographic Commission		A
SAIHC	Southern Africa and Islands Hydrographic Commission		O
SWPHC	South-West Pacific Hydrographic Commission SWPHC International Charting Coordination WG SWPHC Marine Spatial Data Infrastructure WG SWPHC Work Plan & Priorities WG SWPHC SPI WG	Chair Vice-Chair Chair	M M M M M
EAHC	East Asian Hydrographic Commission		O
WWNWS	World-wide Navigational Warning Service Sub-Committee		M
IBSC	International Board on Standards of Competence for Hydrographic Surveyors and Nautical Cartographers	Chair	M
SCUFN	GEBCO Sub Committee on Undersea Feature Names		M



International Hydrographic Organization  
*Organisation Hydrographique Internationale*

North Indian Ocean Hydrographic Commission



# Action Requested from NIOHC21

- Please Note this Australian National Report



THANK YOU

