



## AusSeabed Newsletter No. 22 February 2021

Dear AusSeabed Community,

Happy New Year everyone! I hope you all had a good holiday season and that 2021 proves to be a better year for all. With the increasing support that AusSeabed is receiving and the numerous activities taken place nationally, 2021 promises to be a great year for the seabed mapping community. From [GMRT- AusSeabed](#), an Australian Research Data Common funded project to the [Hydroscheme Industry Partnership Program](#) (HIPP) going full swing (see news below), through to the [Schmidt Ocean Institute](#) continuing to partner with Australia to fill some of the most unknown yet important region of Australia, and to the [RV Nuyina](#) soon joining Australia's fleet, Australia is bringing the seabed to the surface. We also do not want to forget that 2021 is marking the opening of the [Decade of Ocean Sciences for Sustainable Development](#) and seabed mapping is an essential component to realise *"the Ocean We Want"*.

During the week of 11th January 2021, I participated in the annual [GEBCO](#) week, and all I can say is that there has never been a greater time to be part of this community. Amazing progress is being made, global synergies are being forged and collaborative opportunities abound, and AusSeabed is in the midst!

So, what can we expect from AusSeabed in this first quarter of 2021? We will be focused on 1) getting GMRT-Australia off the ground, 2) launching the much-awaited AusSeabed QA Tool, 3) planning our 2021/22 work plan, and 4) engaging with you and others during the many upcoming events below.

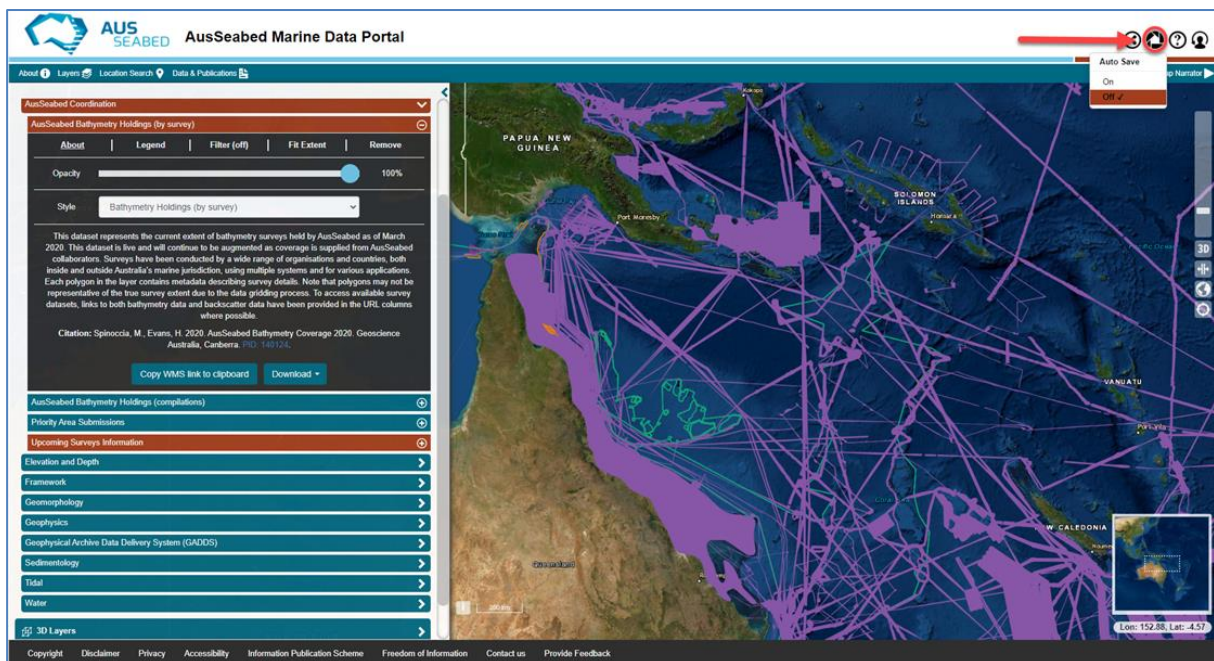
On behalf of the Steering Committee, I look forward to hearing and discussing your thoughts further throughout 2021 and beyond, continuing the good work with all of you, which promises to be nothing less than an exciting and prosperous 2021!

Kim Picard

# AusSeabed Portal Update

Save my space! The AusSeabed Marine Data Portal will have an **Auto Save** function which, when turned on, will automatically open the layers from your previous session, including the filters, map extents and opacity.

To enable this, just click the icon on the top right-hand corner of the Portal and select 'On' to begin saving your last display! In future, we are looking at visualising large-scale point clouds in real-time through the AusSeabed Marine Data Portal, as well as having an interactive AI Chat box that is voice and text activated, which will have help information, search, add and remove layers and tools, which will be a first for any spatial data portal!



## GEBCO WEEK 2021

GEBCO week 2021, which included the *Map the Gaps* Symposium, and sub-committee (TSCUM, SCRUM, and SCOPE) and the Guiding Committee (GGC) meetings, was hosted by the Intergovernmental Oceanographic Commission (IOC) of UNESCO and the French Naval Hydrographic and Oceanographic Service (SHOM)

from 11-20 January. A record number of 461 participants from 59 countries. During the GGC, a change in leadership has been announced with Evert Flier, Norwegian Mapping Authority, and Marzia Rovere, ISMAR, taking on the Chair and Vice-Chair roles.

Presentations from the Symposium can be [accessed online](#). Visit the Symposium web site to access the Zoom links.

## **AUSTRALIAN'S NATIONAL HYDROGRAPHIC SURVEYING HAS EVOLVED – HIPP HAS ARRIVED**

The past 12 months has seen a dramatic change in approach to the way the Australian Hydrographic Office (AHO) meets its legislated obligations. The implementation of the HydroScheme Industry Partnership Program (HIPP) has seen a planned and prioritised maritime data collection program being matured to provide the data required for product updates and delivery of more current and relevant services. The keystone of this program is the partnership formed between the AHO and the commercial survey industry to form a panel of companies that will undertake the survey of Australia's seabed. The AHO has entered into a partnership with iXblue Pty Ltd, EGS, Fugro Marine Australia, Precision Hydrographic Services (PHS), Guardian Geomatics, MMA Offshore (Neptune) and Discovery Marine Australia Limited (DMAL); collectively referred to as the HIPP Panellists. The HIPP has a strategic goal of full seabed coverage of Australia's EEZ by 2050.

HIPP commenced operations in March 2020, and despite the challenges of COVID19, has forged ahead with data collection and processing activities. Thirteen projects have been signed into contract in the first year, collecting over 65000 nautical line miles of MBES and LiDAR data. To allow interested parties to keep updated with HIPP survey activities and view future survey areas relevant information is presented as ESRI story maps via the AHO portal <http://www.hydro.gov.au/NHP/>.

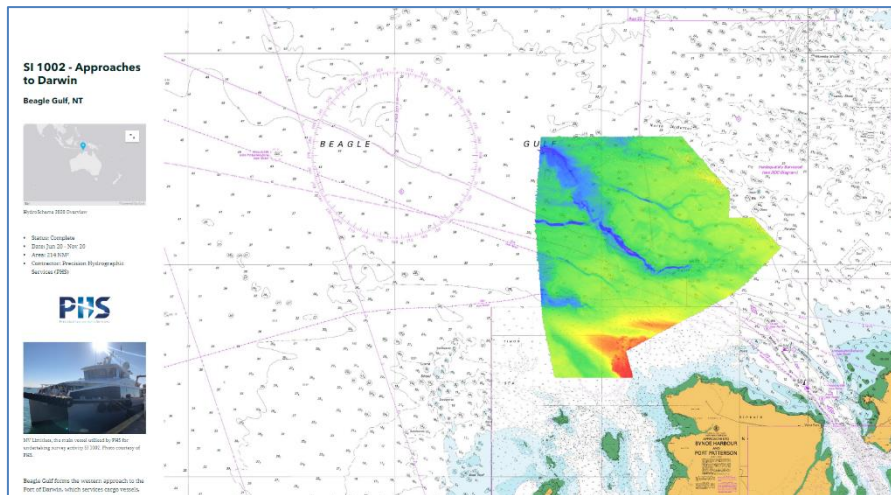


Image 1 – A screen capture from the HIPP Story map detailing SI 1002 Darwin and The Beagle Gulf (PHS)

The first year has seen surveys undertaken around Australia with survey vessels mobilised out of Darwin, Broome, Cairns, Hobart, Adelaide, Whitsunday Islands and the Torres Strait with a focus on improving the quality of nautical charting in critical shipping areas. HIPP recently released its plan for financial year 21/22 via HydroScheme 2021, which is also available at the AHO web site. HydroScheme will be that key document to describe the work to be undertaken through the HIPP.



Image 2 – HIPP Operational sites 2020

There have been many lessons learnt during the first year of operations. A routine has now been established of issuing requests for quotations, evaluation of tenders and the resultant work in contract negotiation and management with the individual companies. An operations stage follows where a client representative works closely with the company to ensure that the Commonwealth expectations are met and to provide an interface between the infield surveyors and the AHO. With the first surveys now delivered to the AHO, the HIPP team are taking on the task of verifying the data received. This span of activity was underpinned by significant work in developing processes and procedures to facilitate this new way of doing business, supported by a degree of organisational workforce change.

The past year has produced many challenges for Australians learning to live and work with COVID 19 and delivering a busy HydroScheme program was challenging. Despite the restrictions, the HIPP team and an invested and willing survey industry have managed to progress a full annual program. Some survey priorities were amended to



safeguard remote locality communities in FNQ, NT and WA. Innovative use of 'client online portals' has allowed the team to monitor the progress of surveys in areas where they cannot travel due to state and territory access rules.

HIPP is targeting more than just bathymetry, adopting the 'survey once use many times' approach. The surveys conducted during this initial period collected bathymetry, backscatter, seabed samples as well as extensive tidal and offshore geodetic observations. It is planned to expand the range of data collected in future to include water column data and oceanographic observations, demonstrating the value of HIPP activities to a wide user base.

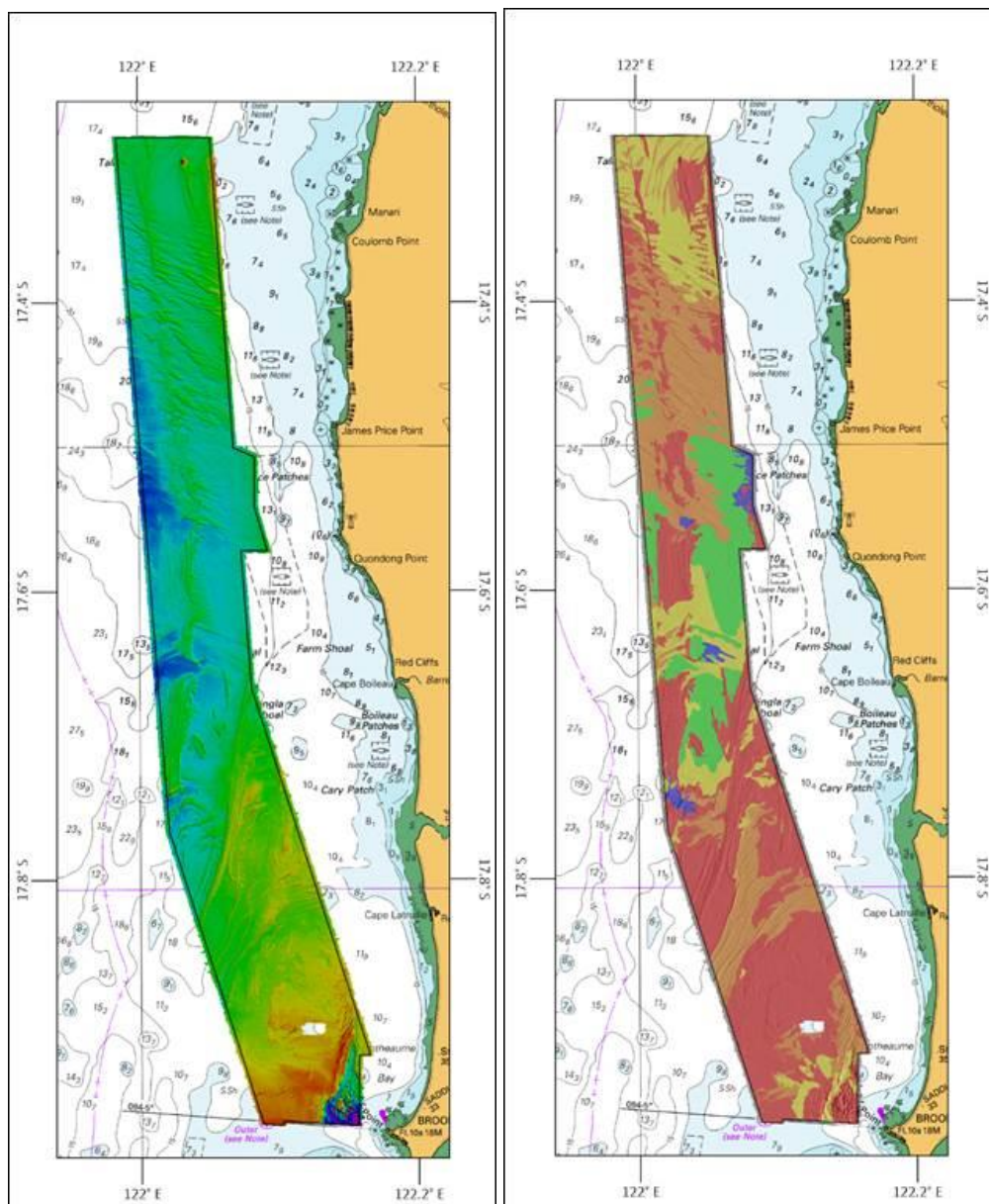


Image 3 – Complimentary Datasets for SI 1010 – App Approaches to Broome (EGS) showing bathymetry on the left and a seabed textures overlay on the right.

Another HIPP initiative is the establishment of a series of National Reference Surfaces (NRS) to allow MBES users to test their system performance over high accuracy reference sites. These will be 500 x 500m patches of seabed surveyed to Special Order and provided as bathymetric surfaces relative to LAT, GRS80 and MSL datum. NRS are planned to be surveyed off Cairns, Darwin, Broom, Adelaide and Hobart during 2021.

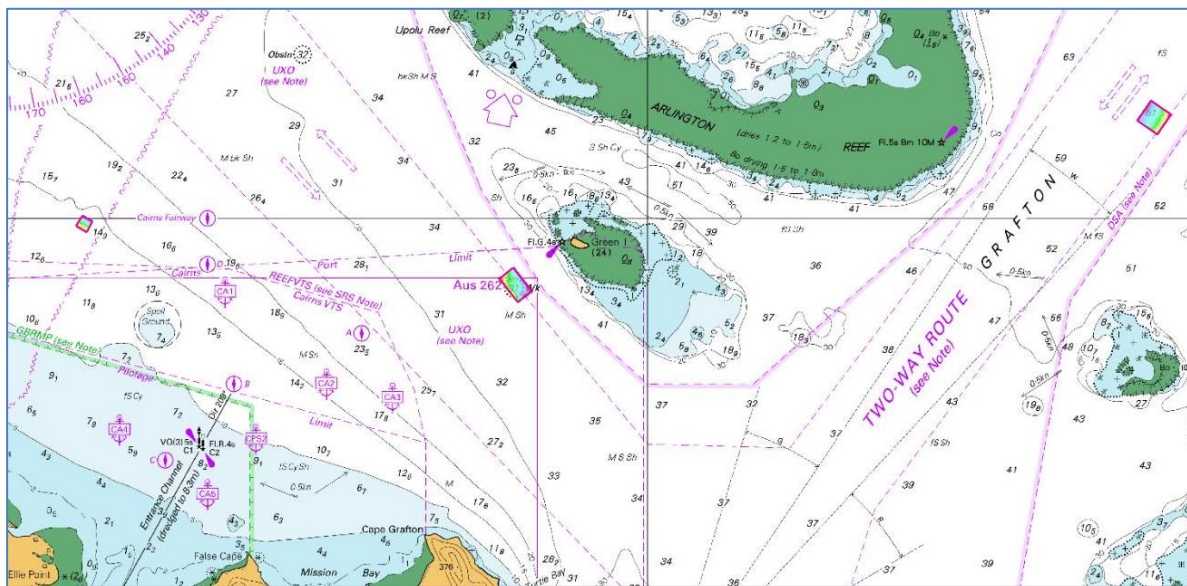


Image 4 – 3 National Reference Surfaces Established off Cairns (iXblue).

One of the founding principles of the HIPP was to promote and encourage innovation and to act as a stimulus for technology development and integration for the hydrographic survey industry within Australia. HIPP has contracted several projects that mobilised Unmanned Survey Vessels, the first time these vessels have been used for nautical charting surveys in Australia. Similarly, HIPP is not solely focused on vessel based MBES data, a recent project mobilised the latest generation LADS HD+ Bathymetric LiDAR system. In the education sector, the AHO would also like to explore the feasibility and appetite for a domestic Cat A and B course that would not only meet Australia's need to grow a sustainable and guaranteed workforce but also provide a regional solution to meet a growing need within the Pacific and South East Asia.



Image 5 - Fugro Blue Shadow – FAS 900 USV underway in the Gulf St Vincent

The key word in the whole HIPP construct is 'Partnership'. Partnership not only between the AHO and the HIPP Panellists, but also between the HIPP and other governmental agencies with collaborative initiatives such as AusSeabed, with HIPP now a major funding partner of AusSeabed. Over the course of the past year the HIPP team have worked closely with the AusSeabed team to produce the HIPP Request Portal within the Survey Coordination Tool on the AusSeabed website. This allows anyone who has a legitimate requirement for environmental data in the maritime domain to register and request areas to be considered for survey by HIPP. Requests are welcome anytime, but the HIPP team will soon commence compiling HydroScheme 2022 for FY 22/23, with a closing date for requests to be received by 30 June 2021.



The HydroScheme Industry Partnership Program (HIPP) is an enduring partnership, with a request timeframe domain of 5-10 years. It aims to boost Australia's hydrographic industry capability allowing partners to acquire maritime survey data for the production of digital maps of Australia's seas and coastal areas.

| REQUEST REGISTRATION | REQUEST BUSINESS CASE | AREA(S) OF INTEREST | SUB-AREA DETAILS | SUB-AREA INFORMATION | REQUEST SUMMARY | REQUEST SUBMISSION DETAILS |
|----------------------|-----------------------|---------------------|------------------|----------------------|-----------------|----------------------------|
|----------------------|-----------------------|---------------------|------------------|----------------------|-----------------|----------------------------|

A valid HIPP Request requires registration and the addition of at least one area of interest. Optional fields are labelled (optional). All other fields are mandatory.

Request Title

Requesting Organisation

Primary organisation submitting the request

Collaborating Organisation(s)

Organisations that are submitting the request

Contact Person

Contact person from the requesting organisation

Contact Person's Role (Title)

Contact email

Where possible, please provide an enduring email address such as a group email for contact

System Record Custodian(s)

Organisations that may contribute to the request in the system

Image 6 – HIPP Survey Request Tool

HIPP has hit the ground running, with a busy first year under its belt and the promise of an equally busy year to come. As 2021 commences we are mobilising four new major survey activities; one in South Australia, two in Bass Strait and one in Torres Strait. The AHO website is updated regularly with planned areas and coverage images as the surveys progress; and the team welcome interaction with maritime and geospatial users to improve what is proving to be an exciting, innovative and efficient approach to gathering Australia's maritime geospatial data.

## References:

HIPP Storyboards: <http://www.hydro.gov.au/NHP/>

AusSeabed: <http://www.ausseabed.gov.au/about/initiatives/register>

# Upcoming Events

## **Locate 2021      (29 March 29 – 1 April 2021)**

COME & JOIN US AT THE GEOSPATIAL EVENT OF THE YEAR FOUR DAYS OF LEARNING, NETWORKING & COMING TOGETHER AS AN INDUSTRY WHO BELIEVE THAT NOW, MORE THAN EVER, LOCATION MATTERS!

- Register: <https://locateconference.com/the-conference/register/>
- Program outline: <https://locateconference.com/the-conference/program/>
- Where: Brisbane Convention & Exhibition Centre (Glenelg St, South Brisbane)

Each year, the Locate conference attracts national and international delegates from within and outside the spatial & surveying industry. As Australia's premier spatial & surveying conference, Locate provides guests with a unique opportunity to learn about the latest trends and applications in geospatial technologies and encourages them to harness the power of location like never before. AusSeabed will be presented in the session:

Surveying the landscape: Big Data & New Technologies

Tuesday, Mar 30, 2021

2:30 PM - 3:40 PM

For more information see - <https://locateconference.com/>

## **GeoHab                      (May 2021)**

The ongoing pandemic precludes in-person scientific conferences in 2021. In order to maintain the cooperative spirit of GeoHab, and specifically to show case the work of students who are having a particularly challenging academic and conference experience due to the impacts of the pandemic, GeoHab has adopted the concept of “nodal” conferences for May of 2021 within adjacent time zones around the world. The world is covered in three GeoHab Nodal Conferences (GNCs): The Americas, Europe and Africa, Asia and the Pacific.

This approach will allow gatherings, or “nodes”, which will be virtually linked via video conferencing within each of the three GNCs. The nodes will be at the individual, small

group, or large group level depending on travel advisories and restrictions in place in May. This will allow a degree of flexibility based on the unknown state of the pandemic in May. The 2021 GeoHab website (<http://geohab.org/geohab-2021/>) will be on line in early February where nodal details and abstract submission information will be posted.

It is anticipated that, following three successful GNCs around the world, a worldwide GeoHab plenary session and AGM will also be held in May 2021. Further details to follow.

### **Australian Marine Sciences Association (AMSA) 2021**

- Thursday 25 February 2021: Early Bird Registration Closes (2021 Registration Fees)
- Friday 26 February 2021: Standard Registration Opens
- Monday 21 June 2021: Online Registration Closes
- Sunday, 27 June 2021: AMSA Conference 2021 Opens
- Friday, 2 July 2021: AMSA Conference 2021 Closes

[Click here](#) for more information.

While the AMSA conference organising committee are endeavouring to have a face-to-face conference, they will be providing options for people to pre-record or deliver talks on-line for those whose agencies have put an indefinite hold on interstate travel.

So please don't hold back on submitting an abstract!

The conference will still host the Annual AusSeabed AGM and Workshop delivered as a combination of face-to-face and/or on-line as circumstances closer to June will dictate.

AUSTRALIAN MARINE  
SCIENCES ASSOCIATION

27 JUNE – 2 JULY 2021  
MACQUARIE UNIVERSITY SYDNEY

**MARINE SCIENCE**



**AMSA**



**2021**

**IN THE ANTHROPOCENE**

## **ABSTRACT SUBMISSION EXTENDED TO MIDNIGHT MONDAY 8TH FEBRUARY**

Due to a higher than expected number of extension requests, the Conference Scientific Committee has agreed to extend the Call for Abstracts deadline until midnight on **Monday 8 February**.

Please note: Only one abstract per presenter will be included in the final Conference Program.

**Submit Your Abstract Now**

If you are yet to submit an abstract, we would like to highlight the two new Symposia recently added for the 2021 Conference:

### **A Changing Southern Ocean – Interdisciplinary Research for Responding to Antarctic Change**

Convenor: Dr Jess Melbourne-Thomas, CSIRO

The Southern Ocean is ‘taking the heat’ in the Anthropocene. It plays a disproportionate role in global heat and carbon dioxide uptake, and areas of the Southern Ocean are amongst the fastest changing on the planet. Southern Ocean environments and ecosystems face an uncertain future, with implications for conservation and for human populations globally. Resolving these uncertainties and identifying policy options to respond to future challenges requires interdisciplinary approaches that integrate across physical, chemical, biological and socioeconomic change. This symposium welcomes presentations that showcase interdisciplinary science for understanding and responding to anthropogenic change in the Southern Ocean.



## **Tropical Systems in a Time of Change.**

Convenor: Dr Will Figueira, The University of Sydney

Tropical regions are host to critically important marine ecosystems in terms of biodiversity, productivity and provision of ecosystem services. Unfortunately, these systems are increasingly under threat. From coastal intertidal regions and mangrove forests to seagrass beds and coral reefs (in and offshore), human impacts are pushing these systems to the brink, and sometimes past their capacity for resilience. In response to continued ocean warming, many tropical species are expanding their ranges into higher latitudes, but we know little about the consequences of these intrusions on recipient temperate systems. This session will provide an opportunity for researchers to showcase their work on these dynamic tropical and 'tropicalised' systems. Papers will look at fundamental aspects of these systems and/or the organisms that occur within them as well as works that highlight the impacts of our changing world on them and how such changes can be measured.

**Due to the ongoing uncertainty about participation and travel, the Organising Committee are currently reviewing options that allows all delegates full participation at the conference in a hybrid format. We are confident that we will find a solution that means all delegates have the opportunity to present their talks whether they participate virtually or face-to-face. Further information on this will be made available to all stakeholders in the coming weeks.**

Should you wish to unsubscribe from the AMSA 2021 Conference Email Database please click [here](#). Unsubscribing from this database will not unsubscribe you from the AMSA Association mailing list, however, you will no longer receive any information relating to the 2021 AMSA Conference.

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For further information visit [www.amsa2021.amsa.asn.au](http://www.amsa2021.amsa.asn.au) or contact GEMS Event Management on 02 9744 5252 or email [amsa2020@gemsevents.com.au](mailto:amsa2020@gemsevents.com.au).

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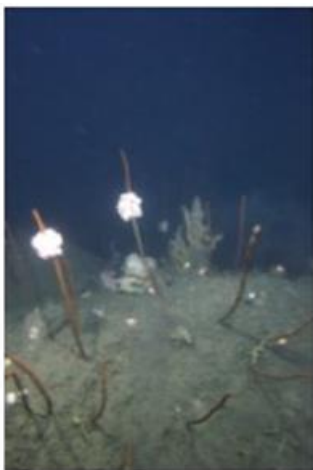
## **NESP Marine Biodiversity Hub**

The NESP report 'Mapping and Characterising Reef Habitat and Fish Assemblages in the Hunter Marine Park' is now available on-line – [click here](#)

The report was released in late December and details MBES surveys, habitat mapping, towed video, ROV and BRUVs work completed within the Hunter Marine Park by NSW Fisheries and NSW Planning Industry and Environment scientists during 2018-2020.

The Hunter Marine Park lies within the Temperate East network of Australian Marine Parks and is located several hundred kilometres north of Sydney on the NSW mid-north coast. The park is unique, as it lies within the separation zone for the East Australian Current and the ecosystems here are subjected to the effects of warming temperatures within one of the world's fastest warming regional seas. As for the MBES data, NSW DPIE worked with GA late last year to make the gridded data datasets available as one of the first NESP Marine Biodiversity Hub data sets that can be accessed via the AusSeabed data portal.

Williams, Ingleton, Sutherland, Davies, Monk, Barrett and Jordan, 2020. Mapping and Characterising reef habitat and fish assemblages of the Hunter Marine Park. Report for the National Environmental Science Program Project D3 Milestone 10 – Implementing monitoring of AMPs and the status of marine biodiversity assets on the continental shelf, NSW government, pp. 187.

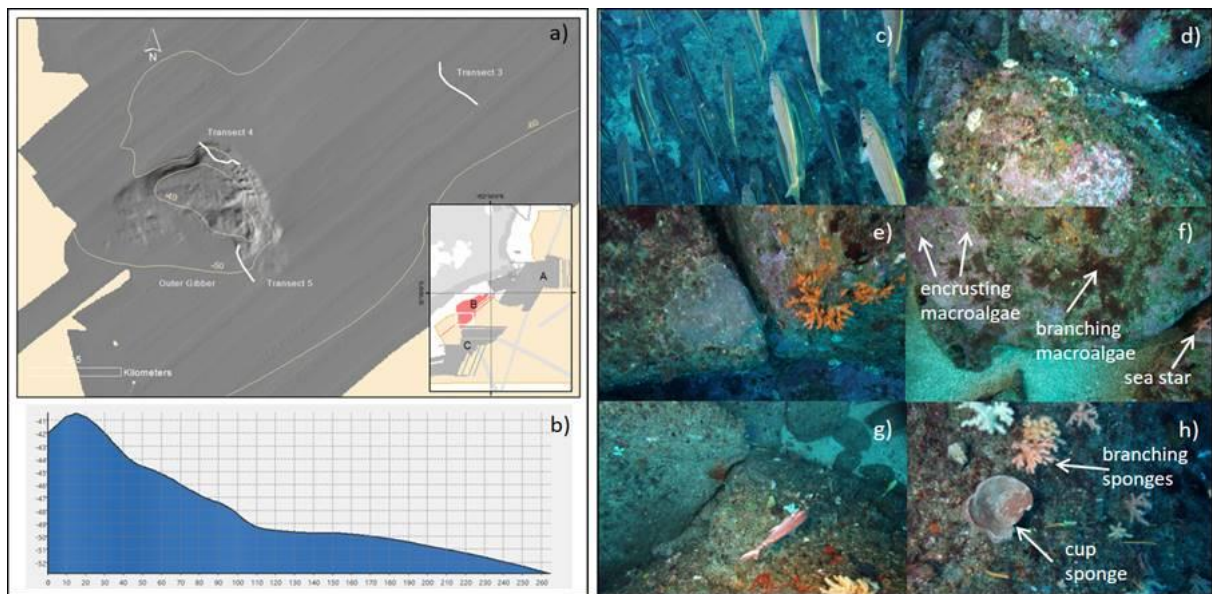


A



B

- A) Ophiroidian 'brittle-stars' as symbionts on Octocorals 'sea-whips' in 110 m of water off Broughton Island, HMP.
- B) The Eastern Rock Lobster *Sagmariasus verreauxi* at the 'Plateau' offshore of Sugarloaf Point and Seal Rocks, HMP.



An infographic of greyscale bathymetry, towed video transects depth profile and towed video imagery at Outer Gibber, HMP.

## European Geoscience Union 2021 (online) 25–30 April 2021

EGU announced that its General Assembly 2021, traditionally held each spring in Vienna, Austria, will instead take place entirely online due to the continuing risks posed by the coronavirus pandemic and the resulting restrictions on international travel. While we deeply regret another missed opportunity to meet with colleagues and friends in person next year, we're committed to graciously accepting circumstances that are beyond our control and continuing the Union's efforts to minimize the impacts of COVID-19 on Earth, planetary, and space science research.

For more information – [click here](#)

## Australasian Hydrographic Society Conference 2021

- We invite you to join us in Wellington at the 9th International Shallow Survey Conference. This conference is recognised world-wide by experts as an important forum for presenting new scientific and technological advancements associated with surveying in shallow waters.
- As a key component of the conference, survey challenges will be set with the aim of targeting specific research questions and/or areas of interest.
- Located in the heart of Wellington on the waterfront, the conference takes place at New Zealand's National Museum & Art Gallery Te Papa Tongarewa 23-27 May 2022.

To learn more visit [www.shallowsurvey.org](http://www.shallowsurvey.org) or email [shallowsurvey@confer.co.nz](mailto:shallowsurvey@confer.co.nz).

## Satellite Derived Bathymetry Day 2021

EOMAP is glad to announce the 2021 edition of the SDB Day! SDB Day, an international Satellite-Derived Bathymetry Technology and User Forum, is hosted by EOMAP/ EOMAP Australia.

Due to the current Covid-19 situation, it will be held as **two virtual conferences** on

- **27th of January 2021: Americas, Caribbean, Europe and**
- **10th of February 2021: Asia and Oceania**

You can access the preliminary agenda [here](#). We invite you to [register here](#) and would be happy to welcome you at the 2021 SDB Day.

### Interesting Read

IHO Review publication

[https://iho.int/uploads/user/pubs/ihreview\\_P1/IHR\\_November2020.pdf](https://iho.int/uploads/user/pubs/ihreview_P1/IHR_November2020.pdf)

## Share your work with the AusSeabed community

Finally, a reminder as always that anyone with an interest in AusSeabed can sign up to the newsletter mailing list on our website, where you can also check out past issues. And please send any items for the next newsletter to [AusSeabedNews@ga.gov.au](mailto:AusSeabedNews@ga.gov.au)