



AusSeabed Newsletter No. 29 April 2022

Dear AusSeabed community,

Please join us on April 28<sup>th</sup> 11am AEST as we highlight the progress made this year, including new portal functionalities to make your work easier! Our Quarterly Showcase is your chance to raise ideas, participate in discussions and provide suggestion so that AusSeabed can better address your needs.

Spread the news far and wide - our annual workshop will again be making an appearance at AMSA! This year our workshop *Collaborating and building a seabed community* will focus on how AusSeabed can help you to benefit from our data infrastructure, tools and community who is committed to collaborating. Join us to learn more about the AusSeabed upcoming program, discuss your experience and your needs, and become a collaborator.

There will also be a full symposium - Multi-disciplinary approaches to monitor change and connections through seafloor mapping – that will touch several topics related to seafloor mapping and characterisation.

Finally, browse through at our Quarterly Highlight Report to keep up to date with the progress and impact AusSeabed has made.

Please reach out to us at [ausseabed@ga.gov.au](mailto:ausseabed@ga.gov.au) if you would like to engage with us or be included in our initiatives.

Kim Picard,

AusSeabed Steering Committee Chair

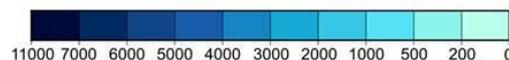
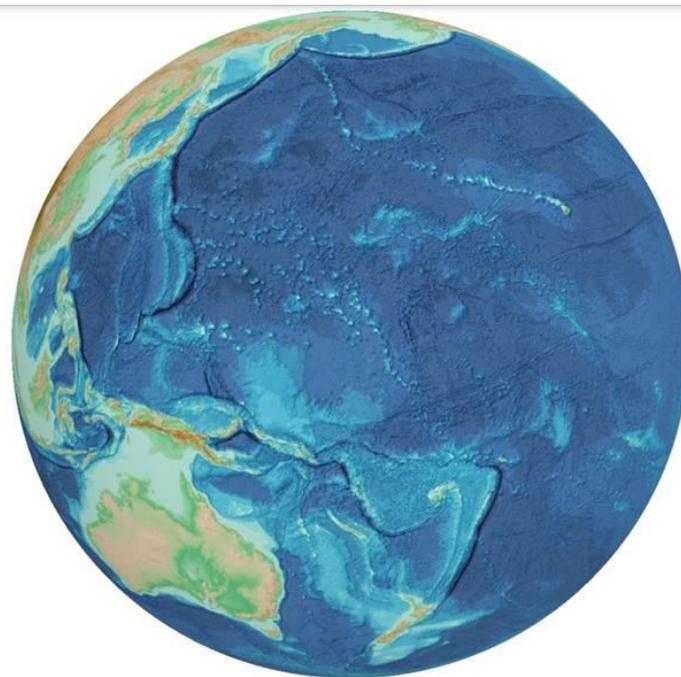
## GEBCO GUIDING COMMITTEE

The 38<sup>th</sup> meeting of the GEBCO guiding committee will take place next week from 20-22th April. The meeting will focus on updates from the parental and subordinate bodies or sub-committees, governance matter, and a workshop to develop a comprehensive strategy for GEBCO. A new sub-committee, the Sub-committee on Education and Training (SCET) will be

officially established. SCET will aim to raise awareness amongst academic institutions of gaps in education and training that may impact on the progress and development of ocean mapping and in particular, the objectives of the GEBCO Programme. If you are interested in shaping SCET strategic agenda, please contact Kim Picard through AusSeabed.

The meeting will be online and in-person, and is open to all as observers. Registration here

GEBCO is a global community focused on providing the most authoritative publicly-available bathymetry of the world's oceans. It's best known collaborative projects are the Nippon Foundation – GEBCO Seabed 2030 project and the fabulous post-graduate training program, which **Applications are open until 30 April 2022**. GEBCO operates under the joint auspices of the International Hydrographic Organization (IHO) and the Intergovernmental Oceanographic Commission (IOC) (of UNESCO).



Bathymetric tints in metres

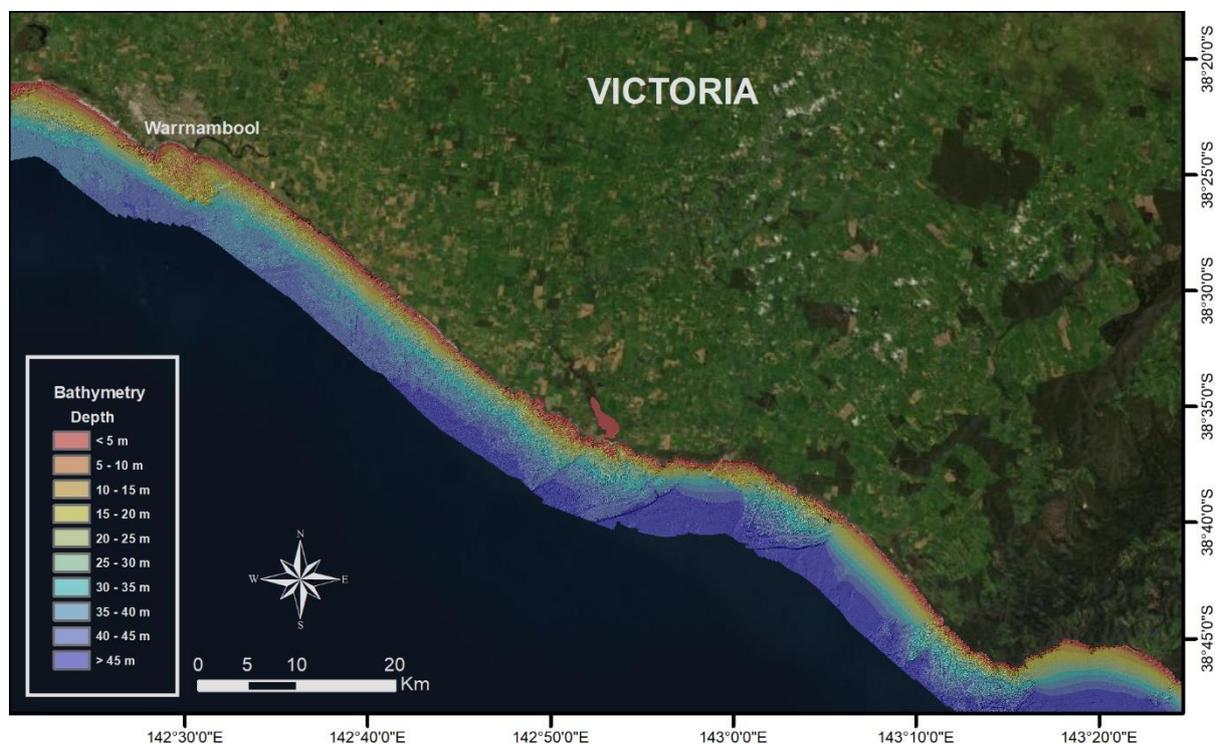
### Western Pacific Ocean

Bathymetry data reproduced from the GEBCO\_2021 Grid, [www.gebco.net](http://www.gebco.net)



## Quantifying sediment budgets and monitoring coastal change along Victoria

The Victorian Government, through the Department of Land, Water and Planning (DELWP), has partnered with Deakin University, The University of Melbourne, and Monash University to use the latest scientific tools to understand patterns of beach erosion along the Victorian Coast in the Victorian Coastal Monitoring Program (VCMP). These tools include unmanned aerial vehicles run through a citizen-science program to map beaches, multibeam echosounders to map the offshore sediment compartments, wave buoys to monitor wave conditions, and satellite remote sensing to quantify shoreline change. The aim of this program is to fully understand the high energy and dynamic Victorian coast from the dunes to offshore where waves are able to mobilise sand during storms.



*Figure 1. Multibeam data collected by Deakin University as part of the Victorian Coastal Monitoring Program (VCMP). The multibeam data is also merged with the statewide bathymetric LiDAR data.*

The information provided from this program is helping Victoria to understand how weather systems are impacting beaches and dunes as well as how sea level rise, changes in wave direction, and intensifying storms may affect them in the future. The results from the studies provided through the VCMP are allowing Victoria to better manage the shoreline environment in preparation for the future. For more detailed information on the VCMP, including results

from some of the analyses, you can explore the project through a collection of [ArcGIS Story Maps](#):

## 37th International Conference on Coastal Engineering

**WHEN: 4-9 December 2022**

**WHERE: International Convention Centre, Sydney NSW**

The goal of the ICCE is to promote academic and technical exchange on coastal related studies covering a wide range of topics including coastal waves, nearshore currents, coastal structures, sediment transport, coastal morphology, beach nourishment, natural hazards and coastal management.

**ABSTRACT SUBMISSIONS FIND OUT MORE HERE**

*\*A special note to authors of accepted abstracts at the postponed ICCE2020 conference:*

Due to the 2-year delay and virtual 'VICCE' that occurred in the interim, the Coastal Engineering Research Council and Sydney Local Organising Committee wish to advise that all abstracts previously accepted will need to be re-submitted to undergo a new and independent peer-review process. Updated abstracts are welcomed.

Original papers are invited in theory, measurement, analysis, modelling and practice, including, but not limited to, the following topics. Practical papers detailing the design, construction and performance of case studies on coastal projects are also encouraged.

Coastal Hydrodynamics and Morphology: Wave theories and wave transformation, tides and tidal dynamics, nearshore currents, sediment transport processes, coastal erosion, shoreline changes, scouring, physical and numerical modelling.

Coastal Structures, Ports, Harbours and Waterways: Wave-structure-soil interactions, breakwaters, ports, marinas, offshore platforms, coastal defence structures, special structures, monitoring, planning, design, reliability based design, construction,

performance, operation, optimisation, maintenance, waterway siltation and dredging.

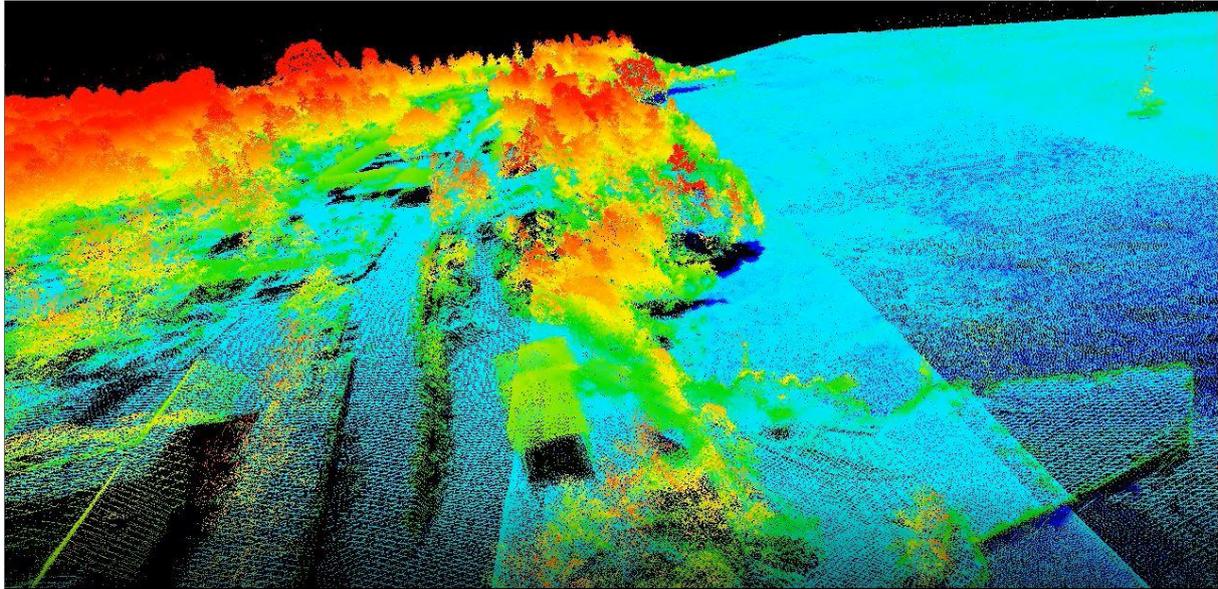
Coastal Hazards and Risk: Climate change, tsunamis, storm surge, freak waves, extreme events, sea level rise, flood risk management and strategies, assessment of coastal risks.

Coastal Management, Environment: Integrated coastal zone managements, marine renewable energy, beach nourishment, nature-based solutions, sustainability of coastal environment, coastal pollution, recreation, water quality, wetlands and estuaries, environmental impacts and compensation.

[Website Link](#)

## All DIGITAL data Co-Located, easily accessible and useable for swp nations

The ability for any nation to utilise the high-quality modern data available to it to mitigate against environmental threats, to undertake environmental and resource management and to maximise the benefit for the Nation's economy is dependent on its ability to access, understand, manipulate and generate knowledge from its data holdings. This is particularly true of Pacific Island Nations whose future existence and welfare is dependent on their ability to know and understand the environment, model change and mitigate against known threats such as climate change, sea-level rise, storm surge, and more; not to mention the economic and environmental benefits that can be generated from effective use of this data. The idea of co-locating all of a nation's digital data, making it widely understood, readily available and easily used is a familiar concept for anyone involved with the AusSeabed Program. However, for many Pacific Island Nations, this is far from a reality, with vital data often not held on the island, not provided in a useable way, or the nation not having the infrastructure to make best use of the data.



To rectify this situation the Government of Niue, through the Ministry of Natural Resources, GEF-funded, UNDP facilitated, Niue Ridge to Reef Project, has commissioned IIC Technologies to develop an Environment Information Management System (EIMS). This enhanced Spatial Data Infrastructure (SDI) will capture, hold, and provide access to the complete set of Niue data, provide interactive visualisation of the data, allow access from mobile devices, have managed access for sensitive data, deliver bespoke analysis and reporting functionality and establish interactive visualisation stations within Niue's museum and other key locations. To date the Project has already captured and co-located much of the relevant data from both on-island and off-island, increasing Niue's data holdings by over 400%.



Unique to this SDI is the intent to provide a solution that will cater for the requirements of all Niue Government departments as well as the Island community. As such it contains functionality such as citizen science and tailored data capture, QR code scanning at cultural and tourist areas of significance and tailored access for each village through 'Village Portals'. What is particularly exciting about this project has been the 'buy-in' from the community that has resulted in the requirement to capture and present numerous data types and information not normally found in a SDI. Although this presents challenges, it will ultimately allow the

capture and preservation of Niue's culture, history, language and traditional environmental practices. Further, Niue has strong ambitions to build the EIMS into their educational practices for the creation of curricula, and for utilisation by the students through the course of their studies at all age levels, and finally, to assist in the management of their environmental efforts.

This EIMS is being tailor-made for the Niue Government but is being built in a manner that will allow it to be developed in the future for other Pacific Island Nations that face the same issues with data access and utilisation.



MSDI Training for the PNG NMSA to assist in developing their safety and Maritime Spatial Data Infrastructure, or a Spatial Data Infrastructure we are building for Niue that promotes all the same intent and ideals of AusSeabed

## DEEP REEF EXPLORER

The Schmidt Ocean Institute (SOI) operates the R/V *Falkor*, an 82 m long state-of-the-art oceanographic research vessel that operates year round throughout the world's oceans.

Marine scientists, students, teachers, technicians and artists from many nations conduct research onboard R/V *Falkor* through dedicated science expeditions. In 2020, SOI committed to operating the *Falkor* for a year-long series of expeditions within Australian waters involving multibeam mapping and using the ROV SuBastian for deep-water exploration and sampling. This talk will focus on the significant mapping efforts conducted by SOI and the *Falkor* during 2020 and early 2021, which also involved overcoming challenges due to the COVID pandemic to allow continued operations during this crisis.

[Link - "RV Falkor surveys in Australia 2020-2021"](#)

[Link – "Hydrospatial 2021 Conference Blog"](#)

## DEEP SEA VIRTUAL EXHIBITION 2022

The World Ocean Observatory (W2O) and Schmidt Ocean Institute (SOI) **announced** today the launch of World Ocean Explorer DEEP SEA exhibit, creating a first-of-its-kind immersive virtual aquarium showcasing deep-sea discoveries. THE **DEEP SEA** is an educational, interactive online platform for ocean exploration and discovery, utilizing high-resolution video, models, and descriptive materials of newly discovered deep-sea ocean species and environments observed during science expeditions aboard research vessel *Falkor* with the underwater robot (ROV) SuBastian.

[Link](#)

## IBSC Recognised S-5B Hydrographic Surveyor and S-8B Nautical Cartographer Program 2022 Enrolments.

Following the success of the 2021 deliveries of the IBSC\* Recognised S-5B Hydrographic Surveyor and S-8B Nautical Cartographers Programs, IIC Academy is pleased to announce that enrolments are now open for the 2022 deliveries of these Programs.

The S-5B Hydrographic Surveyors Program will be delivered again in partnership with Deakin University, commencing Sep 22. For this delivery IIC and Deakin are excited to team with O2 METOCEAN. The generous industry collaboration by O2 METOCEAN will allow the Practical Components of the Program to be run at the O2 facilities in Fremantle, allowing easier access to students from Western Australia. If interest is strong enough, two Practical deliveries in Australia will be considered.

The S-8B Nautical Cartographers Program will be delivered as a 22 week Global Delivery commencing Oct 22. This Programme provides students with the necessary theoretical and practical knowledge and skills required to undertake Nautical Chart production.

If you are interested in attending or wish to obtain more information on either of these Programs please drop me a line at [david.crossman@iictechnologies.com](mailto:david.crossman@iictechnologies.com) or [hydrographicsurveyor@iicacademy.com](mailto:hydrographicsurveyor@iicacademy.com).

Further details on the Programs can also be found at:

<https://www.iictechnologies.com/sites/default/files/iicacademy/IICS5Program.html>

<https://www.iictechnologies.com/sites/default/files/S8B/S8BProgram.html>



\* International Board on Standards of Competence for Hydrographic Surveyors and Nautical Cartographers

## SPEED MAPPING CHALLENGE

Schedule: the challenge will take place over **1 month**. It will start on **April 4, 2022**, and end on **May 6, 2022**. The 3 winning teams will be announced on **May 13, 2022**.



A student competition initiated by the Canadian Hydrographic Service, the COMREN network, and the Canadian Hydrographic Association.

"Form a team of 2 to 4 students and reinvent the way navigational charts are produced."

**Goal:** Using **open data** and **free software** only, prototype a cartographic production chain. Test your production chain on an area of interest (among the proposed sites). Publish your map and present your methodology.

**Impact:** The Speed Mapping Challenge is an opportunity to renew the way navigation charts are produced. It will explore the possibility of producing charts on demand to speed up the publication of hydrographic data and thus drastically reduce the time needed to update cartographic products.

## GEBCO SUB-COMMITTEE ON UNDERSEA FEATURE NAMES (SCUFN)

**Subject: Call for nominations of two IOC-affiliated members to the GEBCO**

IOC Member States are invited to nominate candidates to fill two vacancies of the IOC membership in the General Bathymetric Chart of the Oceans (GEBCO) Sub-Committee on Undersea Feature Names (SCUFN). The selection of the candidates will be made on the basis of expertise, geographical and gender balance as much as possible.

IOC Member States wishing to propose nominations are kindly invited to complete the application form in Annex C and send a CV to my secretariat, c/o Mr Toshihiko CHIBA ([t.chiba@unesco.org](mailto:t.chiba@unesco.org)), by 27th April 2022. I invite you to pay particular attention that the effective date of membership is different for each of the positions. The CV should outline the credentials and experience of the nominee with regard to the criteria described above.

**IOC Circular Letter No 2883** IOC/VR/JB/TC

(Available in English and French) 24 March 2022

To: IOC Member States (Official National Coordinating Bodies for liaison with the IOC) Permanent Delegates/Observer Missions to UNESCO and National Commissions for UNESCO of IOC Member States

cc.: The Chairperson and Vice-Chairpersons of the Commission Officers of Major IOC Subsidiary Bodies (Scientific, Technical and Regional) IHO Secretariat (SCUFN Secretary)

**Subject: Call for nominations of two IOC-affiliated members to the GEBCO Sub-Committee on Undersea Feature Names (SCUFN)**

By this circular letter, IOC Member States are invited to nominate candidates to fill two vacancies of the IOC membership in the General Bathymetric Chart of the Oceans (GEBCO) Sub-Committee on Undersea Feature Names (SCUFN). The selection of the candidates will be made on the basis of expertise, geographical and gender balance as much as possible.

The establishment of SCUFN arose from the need for a uniform policy for handling geographical names and the standardization of undersea feature names. SCUFN normally consists of 12 members, preferably 6 members being appointed by the International Hydrographic Organization (IHO) and 6 members by IOC acting in close consultation. Each member of SCUFN shall be appointed for a five-year period, renewable for one additional five-year term by the corresponding parent organization (IHO or IOC) if so recommended by SCUFN through the GEBCO Guiding Committee (GGC). The Terms of Reference and the Rules of Procedure of SCUFN are enclosed in Annex A for reference. The current membership of SCUFN is provided in Annex B.

Following the 34th meeting of SCUFN last November, the Chair of SCUFN was informed through a formal notification of the Russian Federation that Dr Aleksander ALEKSEEV (Russian Federation), an IOC-appointed member, needed to step down from his position due to another appointment. Therefore, **the appointment of this seat will become effective as soon as the candidate is selected.**

## Geoscience Australia Job Post

There are many Job opportunities at Geoscience Australia at the moment. Amongst them is a [Marine Project Coordinator](#) with the AusSeabed team **open until Wednesday 20 April 2022**. This is a non-ongoing APS6 position until 30 June 2023.

We are looking for someone to join our passionate team and help deliver our collaborative AusSeabed program focused on coordinating seabed mapping efforts, including the creation, collation and the publication of seabed mapping data and products to be openly accessible to ocean stakeholders.

The best thing about this job is the team and broader seabed mapping community culture. We are all passionate about the work that we do, whether it is about processing and publishing data, developing the data infrastructure, engaging with the broad range of stakeholders and

users to better understand and deliver to their needs, or interpreting and discovering new seabed features. There is so much of the ocean to discover, join us to help 'Bring the seafloor to the surface' to support management of our marine jurisdiction and the growth of the Blue Economy.

[Apply here](#). Applications will close on **Wednesday 20 April 2022 at 11:59pm**.

## UPCOMING EVENTS

### APPEA 2022: 16-19 May 2022

The APPEA Conference and Exhibition remains the only conference that is run by the industry, for the industry and is why so many trust the event as their 'go to' investment each year.

The APPEA 2022 Conference and Exhibition will be held from 16 – 19 May 2022 at the Brisbane Convention & Exhibition Centre, Queensland. Both onsite/in person and virtual registrations will be available.

For further information on all aspects of the conference including the program, sponsorship and exhibition opportunities visit [link](#).

### Locate 2022 Program



On behalf of the Locate Australia Conferences it is our pleasure to invite you to join us at Locate22, 24 – 26 May in Canberra, Australian Capital Territory.

Locate22 returns to the Nation's Capital in the traditional format of a live event at the National Convention Centre Canberra (NCCC). With the ability to be COVID safe, within a socially distanced environment, the NCCC is the perfect venue for Australia's premier spatial and surveying conference. Canberra brings an incomparable setting with iconic national attractions surrounding Lake Burley Griffin and the Parliamentary Triangle.

This year Locate22 will incorporate dedicated streams into the format of the conference. This will enable focused discussion from across industry sectors on how location technologies and practices are being used, highlighting the fundamental role they play in shaping Australia's future.

### **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)