



AusSeabed Newsletter No. 5

July 2019

AusSeabed: a year in review

The 2018-19 financial year was a mammoth one for AusSeabed, with a huge amount accomplished by a wonderful and driven community. AusSeabed now has both a firm governance structure and a clear vision of how the program will develop in the coming years. The concept and visibility of AusSeabed has gained momentum, with many new and prospective collaborators and supporters. Preparation of the Strategic Plan and associated roadmaps has played a large part in defining the direction of AusSeabed, and we are excited to launch the *Strategic Plan* at the upcoming AMSA conference.

A major step forward was the definition of three 'Program Themes', 1) the Data Hub (led by Kim Picard, Geoscience Australia), 2) the Tools, Standards, and Guidelines (TSG, led by Nathan Quadros, FrontierSI), and 3) Outreach, Education, and Training (OET, led by Ralph Talbot-Smith, WA Department of Transport). Working groups in each of these themes have tackled a wide variety of activities, from planning and development of new online seabed mapping tools, to spreading the word about AusSeabed in Australian and international forums. Regarding the latter, not only did AusSeabed hold three very productive workshops, but the AusSeabed program was presented to a wide variety of audiences in meetings, lectures, and workshops in Australia and beyond. We also started this monthly newsletter—which has over 250 subscribers after only four issues—and established branded products and templates as well as a promotional video.

This was a great year for developing new collaborations. A strong AusSeabed presence at the inaugural meetings of the Seabed 2030 South & West Pacific and Atlantic-Indian Ocean Regional Centres put AusSeabed on the front foot for ensuring that our work here in Australia remains globally relevant. We have also formed new ties with NOAA and the University of New Hampshire's Centre for Coastal and Ocean Mapping—both world leaders in seafloor mapping—through a three-week residency of Giuseppe Masetti (CCOM) and Tyanne Faulkes (Pacific Hydrographic Branch, NOAA) at Geoscience Australia. Members of the OET program theme have also established links with educational institutions to foster the development of the next generation of hydrographic surveyors.

We have made excellent progress both on planning and developing tools for the Data Hub, while making new seabed data and layers available on the AusSeabed data portal, increasing the availability and visibility of seafloor data. A large volume of work was achieved both at the Data

Hub standards workshop in May 2019 and the 'Effective Seabed Mapping Workflow' workshop held by Tyanne and Giuseppe in June 2019. These gatherings efficiently pooled the cumulative knowledge of the seabed mapping community to establish best-known practices to future-proof the Data Hub.

2019-2020 is shaping up to be just as productive, as we build on momentum gained throughout the past year and continue putting plans to action. The AusSeabed Annual Workshop and AGM will be held next week, and no doubt both meetings will feature lively discussions. We look forward to having you on board for another great year!

Upcoming AusSeabed events

AMSA conference and AusSeabed Annual Workshop NEXT WEEK

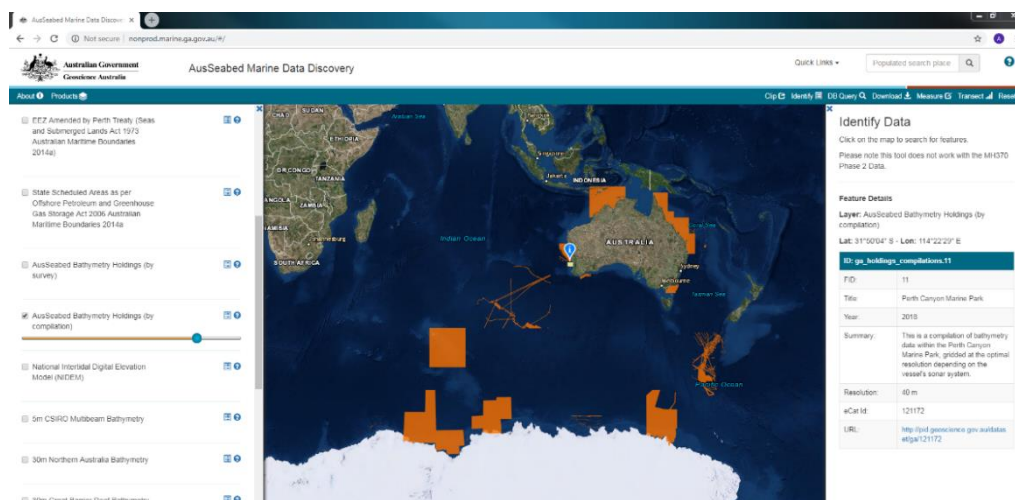
The Australian Marine Science Association 2019 conference will be held in Fremantle on the **7-11th July**. The conference features two very relevant sessions: a full-day symposium on seafloor mapping (**Thursday 11th July**), and the AusSeabed workshop and AGM (**Friday 12th July** after the conference). This will be a key meeting for AusSeabed as we finalise the Strategic Plan and the program theme roadmaps, and present new tools and data. Registrations for the conference have been filled, and unfortunately, numbers for the AusSeabed workshop are being finalised so if you have not gotten in contact with us yet, and would like to attend please email us at ausseabed@ga.gov.au ASAP. We look forward to seeing many of you in Fremantle!

The bi-annual meeting of the AusSeabed Steering Committee will also take place on **Wednesday 10th July**.

Updates

New data and useful layers available on the AusSeabed portal

We have recently added some layers to the [AusSeabed Marine Data Discovery Portal](#). These include Australia's EEZ, state scheduled areas, the [National Intertidal Digital Elevation Model](#)



(including a link to the data download), and a new layer showing coverage of available bathymetry compilation products.

CCOM – NOAA – AusSeabed collaboration

Tyanne Faulkes (NOAA) and Giuseppe Masetti (CCOM) are approaching the end of a three-week visit to share their open-source bathymetry data management tools expertise and to develop common initiatives that will increase efficiency of the seabed mapping in Australia. Following a very successful workshop (summarised below), the combined forces of NOAA, CCOM, and GA have been working on simultaneous incubator projects to facilitate automated quality analysis of seabed mapping data. While Tyanne and Giuseppe have been working on 'QAX', a batch-processed execution of the existing [QC Tools](#) software, Wenjun Wu and Justy Siwabessy (GA) have been working on 'MATE', which will perform quality analysis on raw multibeam data that can be used in near-real time on vessels and when data arrives in the office. The goal of both these projects is to have unified outputs that are machine- and human-readable, and which could automatically generate products such as reports or dashboards. More information will be given at the AMSA conference next week or otherwise contact AusSeabed@ga.gov.au.

Program themes

Data Hub

The Data Hub working group has been organising workshops and discussions, which outcomes will be incorporated into work plans for the coming financial year. The minutes from the recent Data Standards and 'Effective Seabed Mapping Workflow' workshops should be available on the AusSeabed website shortly. Several members of the working group also met in June to discuss plans for a point cloud data analytics and delivery service, which we expect to initiate this year.

Outreach, Education, and Training (OET)

Members of the OET working group have been finalising the upcoming 'Seafloor Mapping in Australia' symposium that will take place on the **Thursday (11th July)** of the AMSA meeting in Perth. The symposium features ~17 oral presentations as well as some posters, covering a wide range of topics including new data, new methods, new applications of seabed data, and technological innovations. This promises to be an excellent day of marine science, and will be chaired by members of the OET working group.

As a way of tracking our outreach efforts, Ralph Talbot-Smith is in the process of developing an online tool for recording individuals and organisations where AusSeabed has been presented. This is likely to take the form of a database linked to Google Maps, so that users can easily see the location and details for previous AusSeabed presentations. Stay tuned for more information

and public release! If you have helped in this space by presenting or writing about AusSeabed, please let us know at AusSeabed@ga.gov.au

Tools, Standards, and Guidelines (TSG)

The TSG working group met on the 7th June to discuss progress on the many activities currently underway and to plan activities up until AMSA. Progress has been made on many fronts, including development of the AusSeabed survey planning tool, which will be introduced at the [AMSA AusSeabed workshop](#), and the data QA tool, establishment of AusSeabed processing standards, and providing up-to-date guidelines for LiDAR, satellite, and crowd-sourced bathymetry. A more detailed progress report will be presented at the [AMSA AusSeabed workshop](#) as well as future work plan.

Meeting reports

'Effective Seabed Mapping Workflow' workshop (Geoscience Australia, 18-20 June)

The newly formed AusSeabed collaboration with NOAA and CCOM kicked off with an intensive three-day workshop at Geoscience Australia in June. Visiting scientists Tyanne Faulkes (NOAA) and Giuseppe Masetti (CCOM) gave training and demonstrations on the [Pydro](#) and [HydrOffice](#) frameworks to familiarise workshop participants with the software capabilities and architecture. The final day of the workshop provided a basis to build the work plan for the collaboration between AusSeabed, NOAA, and CCOM, including progressions of the AusSeabed automated processing pipeline. The initial work from this project will be delivered at the [AusSeabed workshop](#), with the development of the pipeline expected to continue into the 19-20 financial year. For more information contact Tyanne.Faulkes@noaa.gov.



'Effective Seabed Mapping Workflow' workshop participants

Upcoming meetings

OceanObs'19—An Ocean of Opportunity (Honolulu, Hawaii)

The [OceanObs'19 Decadal meeting](#) will take place **16-20 September 2019** in Honolulu, Hawaii, where members of the global seabed mapping community will join forces with experts from the OceanObs community and other marine environmental disciplines. Seabed mapping experts attending the meeting aim to underscore the importance of bathymetry as a baseline dataset, and

to show the key role pan-disciplinary collaboration plays in furthering understanding of Earth system processes.

The seabed mapping community—including several members of the AusSeabed community—have been invited to join a break-out session '*Integrating biological observations across the global ocean observing system to inform on ocean health: a roadmap to improve governance*'. This session will bring together global experts from various ocean observation disciplines, with the goal of providing recommendations to the ocean community on how to fully integrate biological observations into a multidisciplinary observing system from the coast to the open ocean. This is a fantastic opportunity for seabed mappers to demonstrate the importance of bathymetry data in providing a complete assessment of ocean health.

The conference is run as a mixed of plenaries, theme panels, session breakouts, and poster and exhibits sessions. The global seabed mapping community plans to be integrated in all of these. If interested (or indeed keen on a holiday in Hawaii), please [register](#). For more information contact Kim at AusSeabed@ga.gov.au.

Other news

Seeking expressions of interest to take over newsletter distribution

Having compiled the first five newsletters, we at Geoscience Australia would like to pass this job on to a new owner. The distribution system has been wonderfully set up by Kam Austine (EGS Survey) and is very straightforward to send around. Putting the monthly newsletter together is a really great way to be completely on top of all AusSeabed happenings and also a nice way to both contribute to and stay in touch with the community. If you are interested, please send us a mail at AusSeabedNews@ga.gov.au.

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 letter to AusSeabedNews@ga.gov.au.