

14 May 21

**The Nippon Foundation – GEBCO Seabed 2030 Project**  
**Intersessional Report to GGC IS01**

**submitted by Jamie McMichael-Phillips**

1. The Nippon Foundation-GEBCO Seabed 2030 Project (Seabed 2030) is now in its 4th year of operation. Since last reporting to GGC in January 2021, our activity has continued against the global backdrop and challenges of the COVID global pandemic; and again, underscores the true resilience of the geographically dispersed Project Team members, DCDB colleagues and wider GEBCO supports/advisers who have shown real strength in overcoming the disruption of remote working to provide continuity of activities across the majority of work streams.
2. In spite of the COVID-related disruption, team members, supported by others within the GEBCO community, have been able to participate in a large number of national and international virtual fora at all levels. Highlights for this period include our participation in the Schmidt Ocean Institute Science Symposium (Feb 21) and the IOCAFRICA-Seabed 2030 Webinar (Feb 21); and also our virtual media presence in the launch of the Economist-Nippon Foundation “Back to Blue” initiative (Mar 21). We have also submitted Seabed 2030 as a major programme in the UN Decade first Call to Action (Jan 21) and as a supporting ocean governance project for the Paris Peace Forum (May 21). We have yet to hear the outcomes of these submissions.
3. Complementing these engagement opportunities, and within a revised Project Media Strategy, we have increased publication of material across mainstream and social media channels, and within the periodic newsletter, “in-depth”. Overall, this has allowed the Seabed 2030 message to be broadcast, calls for action to be made, and industry and technical engagement to take place thus maintaining the engagement theme, amongst an extensive network of partners, contributors and supporters. Work is continuing to reshape our Seabed 2030 website to give it a more contemporary look and feel.
4. An additional, and important, engagement strand has been the launch of our Community Survey (*Wind in the Sails*) to seek user views that will allow the Project to better collate and quantify the value and benefits of seabed mapping and to identify user-defined priority areas. Again, this has further raised awareness of Seabed 2030 across a wider community of organisations and individuals that use geospatial data and also may have new data to offer. First launched in mid-2020, the survey recorded input from some 366 respondents, a number of whom had data to contribute. Based on this success, it was launched for a second time in February 2021 and will run for 5 months. To date we have had over 400 new responses, with more anticipated.
5. We have utilized some XPRIZE funding, kindly donated by the Nippon Foundation, for our Ocean Frontier Mapping initiative by partnering in separate mapping activities: in the Atlantic and Pacific Oceans, with Seakit (Aug 20 – as previously reported), Saildrone (May 21) and Caladan Oceanic (Jan-Apr 21). Here we have benefitted from new data acquisition

either via incremental mapping days or through provision of sonar operators (where none exist onboard) to run systems for transit legs. These activities, generously offered by our partners, cannot replace the mission-essential need for wholesale, and funded, wide-area surveys in remote regions. However, they do deliver a hugely cost-effective method of gathering discrete quantities of important data in otherwise unmapped areas.

6. Separately but related, the Project is proud to be associated with the Schmidt Ocean Institute, and the work of Research Vessel FALKOR, that collected the first public seafloor data of 2021 in support of Seabed 2030 and the UN Decade of Ocean Science. We also continue to receive significant transit bathymetry contributions from key industry partners including Fugro and PGS.

7. To encourage collaboration in CSB, and working closely with IHO's DCDB and other IHO and UNH experts, the Project has delivered a number of data loggers in Greenland, Palau and South Africa for subsequent roll-out to local communities. This is to demonstrate the ease and utility of gathering such data and also to encourage wider participation in collection. The activity is greatly reliant not only on the goodwill of those marine stakeholders who have offered to embark the loggers but also on the support of key country stakeholders who will engage with vessel operators, oversee the rollout and, as Trusted Node actors, assist in the subsequent harvesting of data. We have also provided logging equipment to the SeasYourFuture charity that operates TS PELICAN OF LONDON (PoL) which is the vessel scheduled to undertake the Darwin 200 circumnavigation of the globe in 2022. In the intervening period, PoL has been operating in the Atlantic region and the experiences of extended use of the embarked equipment has allowed refinement of user guidance and system de-bugging by Director DCDB and Prof Brian Calder from UNH. This will stand us in good stead for our other CSB projects. Related, the Seabed 2030 Global Center will now be acting as a CSB Trusted Node for all orphan CSB systems, and associated data submissions, that are not part of other Trusted Node networks. This will involve some modest reformatting of logger data prior to submission to DCDB.

8. Innovation strategy work is still ongoing, and the Team has been active in engaging across a broad sector of technical stakeholders to determine future areas of collaboration and opportunity. In addition to collection of data and gridding, focus areas also include use of web services for handling big data. Within the Project, previous innovative work on development of a new statistics tools now allows a quarterly assessment of mapping progress. At no financial cost to the Project, we are beginning some developmental support activity with a major manufacturer to develop a seabed data uploader (for publicly available data) that will be embedded in data acquisition platforms and will minimise user effort in making data available to Seabed 2030. There is anticipation that, based on the success of this work, other manufacturers will follow suit. We are also working with a government agency and an industry partner to provide input and feedback into their development of AI to process incoming bathymetric data sources.

9. The value of the GEBCO-Nippon Foundation Alumni to the field of ocean mapping, and more specifically to Seabed 2030, is widely recognised. There has been extensive discussion on ways of involving individuals within the Project, and some have already been greatly involved our Ocean Frontier Mapping activities. Work is now well advanced to establish a new post within the Project entitled "Head of Engagement and Development" that will deliver a comprehensive plan that utilizes the skills and experience of members of the Alumni to support a wide range of Seabed 2030 activities.

10. Invaluable work pioneered by the Centres Heads and their teams has continued apace on a range of work that includes revisions to IBCAO v4.0 and IBCSO; and continuing to leverage tools to improve multibeam integration. At the same time, the Centers continue to influence within their networks to encourage existing data flow and to secure new data contributions. We have increased our collaboration with key stakeholders to improve the SRTM15+ base layer in our gridded product. Through providing feedback on potential data issues in the grid, helping to improve the quality of the data set, which in turn helps to improve the GEBCO grid. The Global Center is engaging with a number of government and international science organisations to support the release of global data holdings. The Atlantic and Indian Ocean Center is in the early stages of onboarding a major African maritime nation who are keen to support our mission; and the South and West Pacific Centre has been active in developing our first Nation-to-Seabed 2030 MOU which is expected to go live in June 21. More holistically, we have a duty to properly acknowledge our partner contributions and, in collaboration with TSCOM colleagues, much work had taken place to establish an appropriate metadata library that will allow dynamic reporting of contributions in future grid releases. TSCOM and SCRUM colleagues provided valuable feedback on a draft of the GEBCO\_2021 Grid during the review process.

11. Whilst much crucial work happens behind the scenes at the Centers, the most acclaimed and visible output remains publication of the GEBCO Grids. Whilst the delivery of the 2020 GEBCO Grid saw some 19% of the world ocean floor now mapped, it is worthy of note that a large proportion of data contributed was already archived but had yet to be incorporated in the Grid. Whilst there have been “newly gathered data” contributions in Year 4, there is still much more to be gathered to achieve the 2030 Mission and dialogue at Project Sponsor level is underway on how to address issues of significant fund raising. In the meantime, on current assumptions, the forecast for the 2021 Grid release will be around 21% of ocean mapped. Our plan is to time this next release in an announcement by IOC’s Executive Secretary on 1 Jun 21 during the event to mark the High-Level Launch of the Decade.

12. Work is in train to develop the Y5 budget submission with initial discussions scheduled for early Jun 21 with the Nippon Foundation, who at the recent Sponsors Meeting underscored their continuing support for Seabed 2030. The Strategic Advisory Group, who have now elected their Chair, will begin reaching out across the GEBCO community as part of their work to formulate and deliver key advice that will support the Project.

13. Collaborative work and professionalism remain evident amongst our Team and the Project continues to receive the welcome leadership and support of The Nippon Foundation, GEBCO, IHO and IOC. Without losing sight of the huge resource implications in achieving the mission to deliver 100% mapping of the seabed by the year 2030, Seabed 2030 remains well placed to continue work that supports UN Sustainable Development Goal 14 and as a likely programme within the UN Decade of Ocean Science for which it is a foundational pillar.