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What Are the New Global Initiatives for Mapping the World's Entire Ocean Floor?



Three new global initiatives for mapping the world's entire ocean floor have been announced in London at a special conference organised by The Nippon Foundation-GEBCO Seabed 2030 Project, the international collaborative project to produce a complete, freely available map of the seafloor by the year 2030. They will be overseen by the new Seabed 2030 director, experienced UK hydrographer and former naval officer Jamie McMichael-Phillips, whose appointment was also announced at the conference.

The conference titled 'From Vision to Action', took place at the Royal Society in London on Tuesday 22 October, was convened to mark the progress made in the two years since Seabed 2030 was launched, and to look ahead to the remaining challenges of mapping the gaps in our understanding of the seafloor. In the short time that it has been

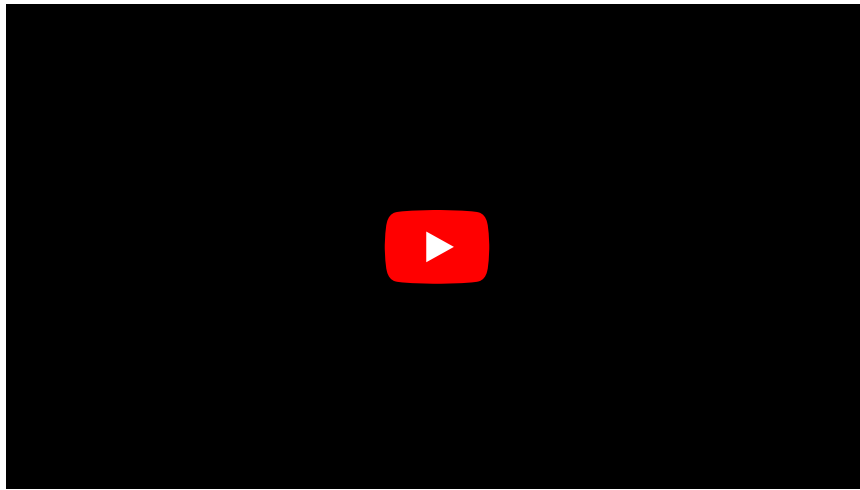
operational, Seabed 2030 has already seen a doubling of the bathymetric data available to produce the definitive map of the world's oceans – an increase equivalent in size to the landmass of the entire African continent.

Data-gathering Equipment

As part of plans announced in London by Mr Yohei Sasakawa, Chairman of The Nippon Foundation, Seabed 2030 will provide vessels around the world with data-gathering equipment to enable them to contribute to the project. These vessels will have data loggers installed to record bathymetric information, increasing mapping capacity and capability and establishing new connections between Seabed 2030 and owners of vessels including fishing fleets, tourist boats, and pleasure craft.

Five Deeps Expedition

In some of the most remote and poorly mapped frontiers of the ocean, Seabed 2030 will fund additional dedicated mapping days for already scheduled expeditions, and create a pool of experienced multibeam echosounder (MBES) operators that can assist expeditions lacking this data acquisition capability to ensure that vital data are collected at all the times, including during transit. This model was recently employed in Seabed 2030's partnership with the pioneering Five Deeps Expedition, led by explorer Victor Vescovo, which gathered detailed bathymetric information at each of its dives to the five deepest points in the world's oceans.



Seabed 2030 will also champion the development of innovative, scalable new solutions to increase the efficiency, safety, and cost-effectiveness of deep-sea mapping, paving the way for public participation on the widest scale possible to meet the project's goals.

Understanding of the Oceans

"The Nippon Foundation-GEBCO Seabed 2030 Project is inspiring an international movement for advancing our understanding of the oceans", said Mr Sasakawa, who launched Seabed 2030 at the UN Ocean Conference in 2017. "This can only be achieved through cooperation and collaboration between scientific research institutes, private organisations, and industry partners on an unprecedented scale. Everyone who travels, explores, or uses our oceans has a role to play and can benefit from this initiative. A complete map, accessible by anyone, anywhere, will be an invaluable tool in the global effort to protect our oceans for generations to come."

Shell Ocean Discovery XPRIZE

From 'Vision to Action' brought together some of the world's leading ocean scientists and maritime organisations, including representatives from the International Hydrographic Organization (IHO) and the Intergovernmental Oceanographic Commission (IOC) of UNESCO. Also in attendance were delegates from the XPRIZE Foundation, industry partners, and the team behind SEA-KIT, the unmanned surface vessel (USV) which formed a key part of the GEBCO-Nippon Foundation Alumni Team's winning entry in the Shell Ocean Discovery XPRIZE.

The conference was opened by HE Mr Koji Tsuruoka, Japanese ambassador to the UK, and addressed by Prof Andy Hopper, Treasurer and Vice-President of the Royal Society. The keynote speech was delivered by Rear Admiral Shepard Smith, Director of the Office of Coast Survey at the US National Oceanic and Atmospheric Administration (NOAA), who spoke about the importance of Seabed 2030 and further international collaboration in support of its aims.

New Director of Seabed 2030

The day also saw the announcement of Mr McMichael-Phillips as the new Director of Seabed 2030. His appointment was unveiled by Vice Admiral (Rtd) Shin Tani, Chair of the GEBCO Guiding Committee, who opened the second session of the conference. Mr McMichael-Phillips is currently the UK Hydrographic Office (UKHO) representative in Singapore. He was previously the UK Deputy National Hydrographer, with an international experience through a long career in the navy and in hydrography. He has been closely involved in various IHO working groups, including a number of years spent as Chair of the Worldwide Electronic Navigational Chart Database Working Group.

Acting Director Dr Graham Allen, who headed up the project from October 2018, will hand over to Mr McMichael Phillips in December this year when he formally steps into the role of Director. "He will bring to the project broad international experience and a background that compliments other members of our team, based around the world", said Dr Allen. "Jamie is well-placed to strengthen the position of Seabed 2030 as a globally recognised initiative, and we are sure that he will be an excellent Director."

Mandate to Map the Entire Ocean

The General Bathymetric Chart of the Oceans (GEBCO) partners The Nippon Foundation in the Seabed 2030 Project. GEBCO is a joint project of the International Hydrographic Organization (IHO) and the Intergovernmental Oceanographic Commission (IOC) of UNESCO – the United Nations Educational Scientific and Cultural Organization. It is the only intergovernmental organisation with a mandate to map the entire ocean floor. It has its origins in the GEBCO chart series initiated in 1903 by Prince Albert I of Monaco and aims to provide the most authoritative, publicly-available bathymetric datasets for the world's oceans.

The Nippon Foundation-GEBCO Seabed 2030 Project is a collaborative project between The Nippon Foundation and GEBCO to inspire the complete mapping of the world's ocean by 2030 and to compile all bathymetric data into the freely-available GEBCO Ocean Map.

Collaborative Project

Working under the auspices of the International Hydrographic Organization (IHO) and UNESCO-Intergovernmental Oceanographic Commission (IOC), GEBCO has a 100-year history of ocean floor mapping. Seabed 2030, launched at the United Nations Ocean Conference in 2017, is building a global community of ocean mappers, hydrographers, scientists, industry and the public to discover and publish all existing bathymetric data. Seabed 2030 advocates for new mapping expeditions to 'map the gaps' in our knowledge of the seafloor and provide the world with the definitive map of world bathymetry.

