OOS2025-551, updated on 06 Mar 2026
https://doi.org/10.5194/oos2025-551
One Ocean Science Congress 2025

Successful new approaches for equitable deep-ocean science-policy engagement

Ana Hilário[1], Kerry Howell[2], and Maria Baker[3]
[1]Centre for Environmental and Marine Studies, University of Aveiro, Portugal
[2]Plymouth Marine Laboratory, United Kingdom
[3]Deep-Ocean Stewardship Initiative, University of Southampton, United Kingdom

The United Nations Decade of Ocean Science for Sustainable Development (2021–2030; hereafter, the Decade) offers a unique opportunity to globally advance deep-ocean science. However, achieving meaningful progress requires moving beyond the conventional model of disconnected research that has resulted in a skewed understanding of the deep ocean, with data heavily concentrated in the North Atlantic, Pacific, the EEZ of economically developed nations, and a workforce that lacks diversity and is disproportionately from just a few geographic regions. These biases limit our capacity to address deep-ocean questions at the necessary global scale, and to support high-level policy processes, including the Agreement on Marine Biodiversity of Areas beyond National Jurisdiction and the Kunming-Montreal Global Biodiversity Framework.

At the onset of the Decade, the Deep-Ocean Stewardship Initiative (DOSI), being mindful of international policy process knowledge requirements, proposed to move beyond “business-as-usual” to a coordinated, community-led, global programme with the ability to advance our understanding of deep-sea marine life at unprecedented scale. The Challenger 150 programme, formally endorsed by the Decade in 2021, focuses on sharing capacity for deep-ocean research, expanding biological observations, building ecological knowledge and increasing the use of deep-sea knowledge in management and decision-making. Twelve regional and three technical scientific research working groups have been established under the programme to facilitate basin scale coordination of research and capacity building efforts, and to help standardise methods and measurements respectively. Half-way through the Decade, Challenger 150 hosts ten Decade actions/projects, has promoted the creation of an active African Network of Deep-water Researchers, reviewed the current knowledge on deep-sea biodiversity in the South and Central Atlantic and in the Arctic Ocean and endorsed over 30 research cruises in all ocean basins. These activities are already leading to enhanced deep-ocean science knowledge in policy discussions, fed in by diverse voices from around the globe.