

Mapping the entire Arctic Ocean by 2030: Is it possible?

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The General Bathymetric Chart of the Oceans (GEBCO) and the Nippon Foundation have jointly established the Nippon Foundation - GEBCO Seabed 2030 Project, with the goal of facilitating the complete mapping of the World Ocean floor by 2030. The project is based on globally distributed Regional Data Assembly and Coordination Centers (RDACCs), each assigned the responsibility for a region of the World Ocean. The Arctic and North Pacific Oceans fall under an RDACC established as a shared center between Stockholm University and the University of New Hampshire; the work of the International Bathymetric Chart of the Arctic Ocean (IBCAO) will now be part of Seabed 2030. The most recently released IBCAO Ver. 3.0 is a gridded digital depth model with a cell-size of 500 x 500 m. Estimates of how much of the Arctic Ocean has been mapped are based on counting the grid cells that contain bathymetric data. In Ver. 3.0 approximately 11 % of the cells contain multibeam bathymetry. Seabed 2030 has adopted a depth-dependent target resolution scheme (depth range/target grid-cell size): 0-1500 m/100 m; 1500-3000 m/200 m; 3000-5750 m/400 m; 5750-11000 m/ 800 m. This implies a higher gridding resolution for most of the Arctic Ocean than in the previously released IBCAO versions. In this presentation, the Seabed 2030 project will be outlined with a specific focus on the North Pacific-Arctic Ocean. The current status of data coverage at the higher Seabed 2030 target resolutions will be shown.