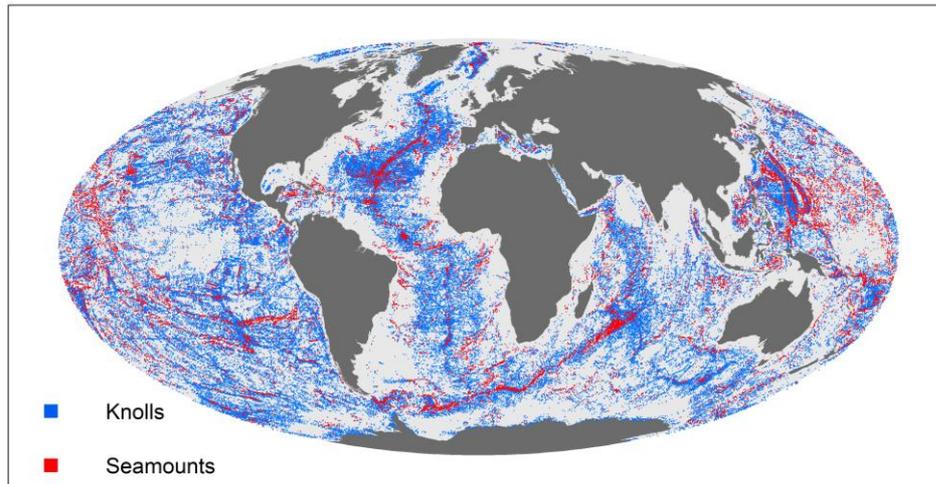


Global Distribution of Seamounts and Knolls (2011)



Description: This dataset shows the global distribution of seamounts and knolls identified using global bathymetric data at 30 arc-sec resolution. A total of 33,452 seamounts and 138,412 knolls were identified, representing the largest global set of identified seamounts and knolls to date. Seamount habitat was found to constitute approximately 4.7% of the ocean floor, whilst knolls covered 16.3%. The research leading to these results received funding from the European Community's Seventh Framework Programme, and from the International Union for Conservation of Nature (IUCN).

Citation(s): Yesson C, Clark MR, Taylor M, Rogers AD (2011). The global distribution of seamounts based on 30-second bathymetry data. *Deep Sea Research Part I: Oceanographic Research Papers* 58: 442-453. DOI: <http://dx.doi.org/10.1016/j.dsr.2011.02.004>. Data DOI: <http://doi.pangaea.de/10.1594/PANGAEA.757564>.

Temporal range: 2011

Geographical range: Global

Supplementary information: The dataset is composed of point and polygon vectors. The polygon subset indicates the location of the base, whilst the point subset is the centroid of that area.

Lists of predicted knolls and seamounts are also provided.

Purpose of creation: Seamounts and knolls provide important habitats for marine predators, demersal deep-sea fish and benthic invertebrates. Most seamounts, however, have not been surveyed and their numbers and locations are not well known. Previous efforts to locate and quantify seamounts have used relatively coarse bathymetry grids.

The database of seamounts and knolls resulting from this study will be a useful resource for researchers and conservation planners.

Creation methodology: Seamount and knoll locations were inferred, using a searching algorithm, from bathymetric data at 30 arc-sec resolution (SRTM30_PLUS, version 6, which is based on a satellite-gravity model). See Yesson et al. (2011) for full details.

Dataset ID: ZSL-002

Version: 1.0 (2011)

Data lineage:

Category: Biogeographic classification

Keywords: deep sea, high seas, benthic, marine, model, seamount, knoll, habitat, ecosystem

Similar datasets: UniCal-001

Limitations: Estimated seamount numbers, locations, and depths were compared with validation sets of seamount data from New Zealand and Azores. This comparison indicated that the method applied found 94% of seamounts, but may have overestimated seamount numbers along ridges and in areas where faulting and seafloor spreading create highly complex topography.

The seamounts and knolls identified herein are significantly geographically biased towards areas surveyed with ship-based soundings. As only 6.5% of the ocean floor has been surveyed with soundings it is likely that new seamounts will be uncovered as surveying improves.

Maintenance frequency: Data are not being updated.

Main access/use constraint: Creative Commons Attribution 3.0 Unported (CC BY 3.0). See <http://creativecommons.org/licenses/by/3.0/> for details. Free to (1) copy/distribute/transmit the work, (2) adapt the work, and (3) make commercial use of the work.

Other access/use constraints: None

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Data format(s): Tabular (.xls, .csv, or .tab), Vector (point; .shp), Vector (polygon; .shp)

Distribution format(s): Vector (point; .shp), Vector (polygon; .shp) Dataset size (uncompressed): 84.5 Mb

Webpage and/or download: <http://data.unep-wcmc.org/datasets/41>

Other webpage: <http://doi.pangaea.de/10.1594/PANGAEA.757564>

Web map service: http://ec2-54-204-216-109.compute-1.amazonaws.com:6080/arcgis/rest/services/marine/ZSL_002_ModelledSeamounts2011/MapServer

Dataset ID: ZSL-002

Factsheet: <http://wcmc.io/seamounts>

Resolution, scale: Not applicable

West bounding: -180.0

South bounding: -77.8

Metadata standard: UNEP-WCMC Specific

Reference system: WGS 1984

East bounding: 180.0

North bounding: 85.0

Date of metadata: 29/01/2016