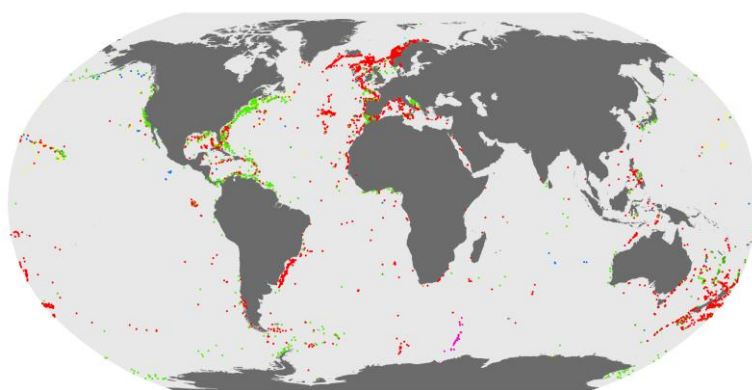# Global Distribution of Cold-water Corals

Description:

This dataset shows of the global distribution of cold-water corals. Occurrence records are given for the subclass Octocorallia (octocorals; also known as Alcyonaria) and four Orders (in Class Anthozoa): Scleractinia (reef-forming corals), Antipatharia (black corals), Zoanthidae (encrusting or button polyps), and Pennatulacea (sea pens). Occurrence records are also available for the order sub-Order Filifera (lace corals) in Class Hydrozoa.

Citation(s):

Freiwald A, Rogers A, Hall-Spencer J, Guinotte JM, Davies AJ, Yesson C, Martin CS, Weatherdon LV (2017). Global distribution of cold-water corals (version 4.0). Third update to the dataset in Freiwald et al. (2004) by UNEP-WCMC, in collaboration with Andre Freiwald and John Guinotte. Cambridge (UK): UN Environment World Conservation Monitoring Centre. URL: http://data.unep-wcmc.org/datasets/3

Other cited reference(s):
Freiwald A, Fosså JH, Grehan A, Koslow T, Roberts JM (2004). Cold-water coral reefs: out of sight – no longer out of mind. Biodiversity Series 22. Cambridge (UK): UN Environment World Conservation Monitoring Centre. 86 pp. URL: https://archive.org/details/coldwatercoralre04frei

OSPAR Commission. (2015). OSPAR Threatened and/or Declining Habitats 2015. URL: http://www.ospar.org/work-areas/bdc/species-habitats/list-of-threatened-declining-species-habitats. Data URL: http://www.emodnet-seabedhabitats.eu/download.

Temporal range:

1915-2014

Geographical range:

Global

Supplementary information:

Attribute table: Automatically generated number (OBJECTID); Unique ID distinguishing the data entry (LAYER_ID); Metadata ID linking to the source of the dataset, found in the associated metadata table (METADATA_ID); ISO 3166-3 character code of country or territory where the feature is located (PARENT_ISO and ISO3); ISO 3166-2 sub-national code(s) where the feature is located (SUB_LOC); English name of the feature as provided by the data provider (NAME); Name of the feature as provided by the data provider in original language (ORIG_NAME); Local definition of feature as provided by the data provider (LOC_DEF); Scientific (Latin) name(s) of family, genus and species (FAMILY, GENUS, SPECIES); Reported area in square kilometres (REP_AREA_KM2); Area calculated using GIS, in square

kilometres (GIS_AREA_KM2); description of whether data have been obtained through remote sensing and/or field survey (DATA_TYPE); data gathering approach (SURVEY_MET); start and end date of data collection (of survey), supplied as text in the format YYYY-MM-DD (ISO date format) (START_DATE, END_DATE); character code that identifies accuracy of dates used in START_DATE and END_DATE to the nearest day(s), month(s), or year(s) (DATE_TYPE); Minimum/maximum depth in metres that the feature was found (MIN_DEPTH and MAX_DEPTH); binomial value indicating whether the feature occurs in an area protected by law or any other conservation measure, where '0' = not within a protected area, '1' = partially within a protected area, and '2' = fully within a protected area (PROTECT); feature protected by law or by any other conservation measures (PROTECT_FEAT); measure that protects the feature (PROTECT_STAT); verification by government or expert (VERIF).

Purpose of creation:

Version 1 of the dataset was created to accompany the report by Freiwald et al. (2004). Versions 2, 3 and 4 were created as updates to the original dataset, to provide a more complete picture of the locations of cold corals globally.

Creation methodology:

Occurrence records were obtained from various sources, including reports, peer-reviewed articles and expert consultations. Many individuals and organisations contributed by providing UNEP-WCMC with their data in electronic form. For more information regarding sources please see the "Metadata_Cold_corals.dbf" table included.

Version:

4.0 (December 2017)

Data lineage:

Version 4.0 (December 2017): Standardises the feature and metadata attributes using a new schema, which aligns the attributes used across the habitat datasets curated by UNEP-WCMC. The updated attribute schema is outlined in "Supplementary Information." Specific changes include the addition of information on level of protection (e.g. PROTECT, PROTECT_FEAT, PROTECT_STAT), indication of whether the data have received expert or government verification (VERIF), and information on the start and end dates of data collection (i.e. START_DATE, END_DATE). The new schema will be used to inform a set of quality indicators, assessing changes in data quality over time.

Versions 2 and 3 were updates implemented by UNEP-WCMC to the original dataset, in collaboration with Andre Freiwald and John Guinotte. Version 2 (with data between 1915 and 2006) consisted of 6,551 data points. Version 3.0 comprises 32,631 occurrences of cold corals, a five-fold increase, as well as an additional 1,203 polygons (covering 4,012 square kilometres), with data collected between 1915 and 2014. The polygon dataset derives from data obtained from OSPAR and Dorschel et al.'s "Atlas of the Deep-water Seabed - Ireland". Version 2 obtained data for 80 countries, as well as locations of cold corals within the high seas, while version 3 obtains data for 132 countries, in addition to the locations within the high seas.

Category:

Biogenic habitat

Keywords:

deep sea, high seas, benthic, marine

Similar datasets: Yesson-001, Davies-001

Limitations:	The high density of reefs shown in the North Atlantic most probably reflects the intensity of research in this region. Further discoveries are expected worldwide, particularly in the deeper waters of subtropical and tropical regions. Please note that taxonomic classifications change frequently.

Maintenance frequency:	Data are updated in intervals that are uneven in duration.

Main access/use constraint:	UNEP-WCMC General Data License (excluding WDPA). See www.unep-wcmc.org/policies/general-data-license-excluding-wdpa#data_policy and www.unep-wcmc.org/policies. For commercial use, please contact business-support@unep-wcmc.org.

Other access/use constraints:	None

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Data format(s):	KML, Vector (point; .shp), Vector (polygon; .shp), WMS		

Distribution format(s):	KML, Vector (point; .shp), Vector (polygon; .shp), WMS	Dataset size (uncompressed):	23 Mb

Webpage and/or download:	http://data.unep-wcmc.org/datasets/3
Other webpage:	http://www.arcgis.com/home/item.html?id=3ecb764343324bcab4c64c66d324cbd0
Web map service:	http://ec2-54-204-216-109.compute-1.amazonaws.com:6080/arcgis/rest/services/marine/WCMC001_ColdwaterCorals2017/MapServer/WMSServer
Factsheet:	http://wcmc.io/cold-coral

Resolution, scale:		Reference system:	WGS 1984
West bounding:	-179.9	East bounding:	179.9
South bounding:	-77.9	North bounding:	71.4
Metadata standard:	UNEP-WCMC Specific	Date of metadata:	21/12/2017