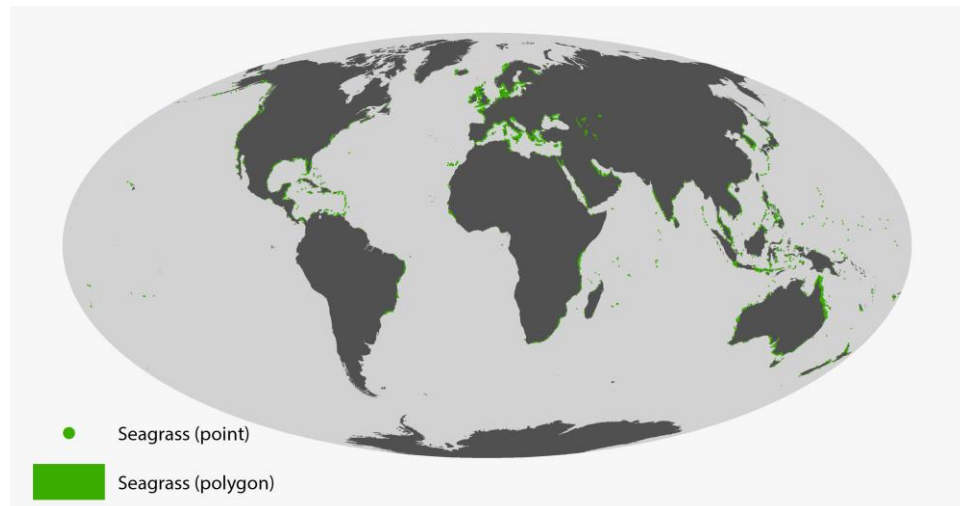


Global Distribution of Seagrasses (2016)



Description: This dataset shows the global distribution of seagrasses, and is composed of two subsets of point and polygon occurrence data. The data were compiled by UNEP World Conservation Monitoring Centre in collaboration with many collaborators (e.g. Frederick Short of the University of New Hampshire), organisations (e.g. OSPAR), and projects (e.g. the European project Mediterranean Sensitive Habitats "Mediseh"), across the globe (full list available in "Seagrass_Metadata_v4.dbf").

Citation(s): UNEP-WCMC, Short FT (2016). Global distribution of seagrasses (version 4.0). Fourth update to the data layer used in Green and Short (2003). Cambridge (UK): UNEP World Conservation Monitoring Centre. URL: <http://data.unep-wcmc.org/datasets/7>

Other cited reference(s):

Green EP, Short FT (2003). World atlas of seagrasses. Prepared by UNEP World Conservation Monitoring Centre. Berkeley (California, USA): University of California. 332 pp. URL: <https://archive.org/details/worldatlasofseag03gree>

Belluscio A, Panayiotidis P, Gristina M, Knittweis L, Pace ML, Telesca L, Criscoli A, Apostolaki ET, Gerakaris V, Fraschetti S, Spedicato MT, Lembo G, Salomidi M, Mifsud R, Fabi G, Badalamenti F, Garofalo G, Alagna A, Ardizzone GD, Martin CS, Valavanis V (2013). Task 1.1. Seagrass beds distribution along the Mediterranean coasts. In: Mediterranean Sensitive Habitats (MEDISEH), final project report (Eds. M Giannoulaki, A Belluscio, F Colloca, S Fraschetti, M Scardi, C Smith, P Panayotidis, V Valavanis, MT Spedicato). DG - MARE, specific contract SI2.600741. Heraklion (Greece): Hellenic Centre for Marine Research. 557 pp. URL: <http://mareaproject.net/download/71>

Telesca L, Belluscio A, Criscoli A, Ardizzone G, Apostolaki ET, Fraschetti S, Gristina M, Knittweis L, Martin CS, Pergent G, Alagna A, Badalamenti F, Garofalo G, Gerakaris V, Pace ML, Pergent-Martini C, Salomidi M, 2015. Seagrass meadows (*Posidonia oceanica*) distribution and trajectories of change. Scientific Reports 5: 12505. URL: <http://www.nature.com/articles/srep12505>

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>.

Dataset ID: WCMC-013-014

Temporal range: 1934-2015

Geographical range: Global

Supplementary information: Attribute table: ISO 3166 3 character code of country ("ISO3"); species (BIO_CLASS); common name (COM_NAME); data source (TITLE, AUTHORS, PUBLISHER, YEAR, etc), record-specific additional information (NOTES).

Purpose of creation: This dataset was originally developed alongside the publication by Green and Short (2003), and was the first authoritative and comprehensive global synthesis of the spatial distribution and status of seagrasses.

Creation methodology: This dataset was created from multiple sources (in 128 countries and territories), including maps (of varying scales), expert interpolation and point-based samples. Before inclusion in the dataset, occurrence records were reviewed using published reports, peer-reviewed literature and expert consultation.

Version: 4.0 (November 2016)

Data lineage: The following changes were made to reach version 4.0 of the dataset:

- Removed 69 polygons (approx. 708 sq km; ID #20) and replaced with better Corsican data (ID #491);
- Added 19,327 polygons (approx. 11,184 sq km) of Posidonia seagrass in Europe, from the MEDISEH project (ID #491);
- Added 6,681 polygons (approx. 421 sq km) of seagrass in British Columbia (ID #492);
- Added 9,211 polygons (approx. 1307 sq km) from OSPAR's 2015 habitat data (ID #495 - 519);
- Incorporated 1 polygon from Malta (58.95 sq km) (ID #493);
- Incorporated 1,533 seagrass occurrence data points (not Posidonia) from MEDISEH (ID #494); and
- Added 7,227 seagrass occurrence data points from OSPAR's 2015 habitat data (ID #520 - 573).

Total spatial changes reflected in the polygon feature class: Removed 708 square kilometres (69 polygons) and added 1,297,092 hectares / 12,970 sq km (35,416 polygons). The seagrass extent (after dissolve by ISO3) is 344,958 sq km. Total change in area between versions 3 and 4 (after dissolve by ISO3) is 7,950 sq km. Total changes to the point dataset include the addition of 8,887 data points.

The attributes have also been updated to use ISO3 to represent respective countries, 'AREA_HA' and 'AREA_SQKM' as the standard units, and 'METADATAID' to refer to the data sources (outlined in the accompanying file geodatabase). Information regarding start and end dates of data collection were also added to the polygon dataset, where available.

This dataset supersedes version 3.0 of the seagrass dataset, which was an updated version of the dataset used in Green and Short (2003). Version 3.0 (2015) incorporated over 16,600 square kilometres of seagrass occurrence data obtained in October 2013 from the Department of Commerce (DOC), National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), and Coastal Services Center (CSC) of the United States. Once dissolved, total seagrass extent in

Dataset ID: WCMC-013-014

version 3.0 equates 314,173 sq km (184,814 polygons).

Category: Biogenic habitat

Keywords: coastal, marine, blue carbon, seagrass, habitat, biogenic, ecosystem

Similar datasets: WCMC-015

Limitations: Validation (of version 1) was also undertaken through a global seagrass workshop comprising experts from 23 countries.

As the dataset contains overlapping polygons, a dissolve operation (by ISO3) in GIS is required before surface area calculations are carried out.

Based on recent genetic and morphometric analysis, *Halophilla johnsonii*, *Halophila hawaiiiana*, *Halophila ovata* and *Halophila minor* are now considered to be morphological variations of, and therefore conspecific with, *Halophila ovalis*. *Zostera mucronata*, *Zostera muelleri* and *Zostera novazelandica* are now considered to be morphological variations of, and therefore conspecific with, *Zostera capricorni*.

Note that the older components of the dataset (particularly in version 1) are likely to have been fitted to the best shoreline data available at the time, i.e. ESRI's "Digital Chart of the World" and "MundoCart digital database (both derived from Operational Navigation Charts). As a result, there may be placement errors when mapped onto recent shoreline datasets (e.g. GSHHD, Open Street Map), e.g. Belize.

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: In relation to the data provided by the Mediseh project (Bellusci et al. 2013; Telesca et al. 2015) for the Mediterranean basin, users must comply with article 11.10.3 of the Framework Contract with the European Commission, i.e. any re-distribution of these data:
1) requires prior written authorisation from the Commission (Directorate-General for Maritime Affairs and Fisheries, Brussels, Belgium),
2) shall mention the amount paid by the European Union (EUR 568,996),

Contact organisation: UNEP World Conservation Monitoring Centre

Organisation type: Custodian **Acronym:** UNEP-WCMC

Name: Dr. Steve Fletcher **Position:** Head of Programme

City: Cambridge **Country:** United Kingdom

E-mail: steve.fletcher@unep-wcmc.org

Web site: www.unep-wcmc.org

Dataset ID: WCMC-013-014

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

Distribution format(s):	Vector (point; .shp), Vector (polygon; .shp)	Dataset size (uncompressed):	853 MB (polygons), 21 Mb (points)
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Webpage and/or download: <http://data.unep-wcmc.org/datasets/7>

Other webpage: <http://www.arcgis.com/home/item.html?id=36b176f90cd341429ccb1b9b1e9aceeb>

Web map service: http://ec2-54-204-216-109.compute-1.amazonaws.com:6080/arcgis/rest/services/marine/WCMC_013_014_Seagrass/MapServer

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

Resolution, scale: 1:1,000,000

West bounding: -176.6

South bounding: -46.9

Metadata standard: UNEP-WCMC Specific

Reference system: WGS 1984

East bounding: 178.6

North bounding: 70.0

Date of metadata: 07/11/2016