JRC Dataset

EMIS - Feeding habitat of fin whales (FBW) in the western Mediterranean Sea Annual climatology 2003-2015 (frequency of occurence, %)

Description:

Feeding habitat (percent of occurence) of fin whales (FBW) in the western Mediterranean Sea 2003-2015 (c.f.: Feeding habitat of fin whales in the western Mediterranean Sea: an environmental niche model - DRUON Jean-Noel; PANIGADA Simone; DAVID L.; GANNIER A.; MAYOL P.; ARCANGELI A.; CANADAS A.; LARAN Sophie; DI MEGLIO N.; GAUFFIER P. (Publications Office of the European Union. JRC65351. doi:10.3354/meps09810 (http://publications.jrc.ec.europa.eu/repository/handle/JRC65351))

Contributors:

- Derycke, Pascal None

How to cite:

Derycke, Pascal(2016): EMIS - Feeding habitat of fin whales (FBW) in the western Mediterranean Sea Annual climatology 2003-2015 (frequency of occurence, %). European Commission, Joint Research Centre (JRC) [Dataset] PID: http://data.europa.eu/89h/170dc73f-e253-427c-9f48-704df35cf500

Keywords:

Habitats and biotopes, chlorophyll-a, feeding habitat, fine whales, front, marine environment, western Mediterranean Sea

Related resources:

Data access

EMIS Marine Maps Platform (SDI)

The dataset is available for download as GeoTIFF, png, KML,...

https://marinemaps.jrc.ec.europa.eu/layers/geonode:fbw_2003_2015_w_med_feeding

EMIS Marine Maps - WMS

Web Map Service (WMS) - GetCapabilities

https://marinemaps.jrc.ec.europa.eu/geoserver/ows/?service=WMS&version;=1.1.0&request;=GetCapabilities

EMIS Marine Maps - WMS

Web Map Service (WMS) - GetMap

https://marinemaps.jrc.ec.europa.eu/geoserver/wms?version=1.3.0&request;=getmap&format;=image/png&width;=1000 &height;=436&la

Other resources

EMIS Marine Maps - GIS viewer

EMIS Marine Maps: The Spatial Data Infrastructure (SDI) for EMIS is proposed as a marine maps platform to support the assessment and the monitoring of the environmental state and marine biodiversity of the European regional seas.

https://marinemaps.jrc.ec.europa.eu

Additional information:

Last Modified: 2016-04-13

Issue date: 2016-04-13

Landing page: http://emis.jrc.ec.europa.eu/

Temporal coverage: From: 2003-01-01 – To: 2015-12-31

Language: English

Data theme(s): Environment

EuroVoc domain(s): 52 ENVIRONMENT

EuroVoc concept(s): biotope

Identifier: http://data.europa.eu/89h/170dc73f-e253-427c-9f48-704df35cf500

Geographic information:

Lineage: The distribution and migration patterns of the fin whale (Balaenoptera physalus) in the Mediterranean Sea are largely unknown. This species is mostly at risk of ship strike, it is therefore essential to develop synoptic tools to derive its habitat at large scale. We describe a foraging habitat model for fin whales in the western Mediterranean Sea relying on species ecology for the choice of predictors. The selected environmental variables are direct and resource predictors available at daily and large scales. The feeding habitat was mainly processed from the simultaneous occurrence of large oceanic fronts of satellite-derived sea surface chlorophyll content (CHL) and temperature (SST). A specific range of surface chlorophyll content (0.11-0.39 mg m-3) and a minimum water depth (93 m) were also identified to be important regional criteria. Daily maps were calibrated and evaluated against independent sets of geo-located fin whale presence data. The main predictor of feeding environment was specific CHL fronts, therefore the derived habitat is potential and functionally-linked. The model performs well with 80% of presence data closer than 8.8 km of the predicted potential habitat. The computed monthly, seasonal and annual maps of potential feeding habitat from 2000 to 2010 generally correlate with current knowledge on fin whale ecology. Overall, the size of potential habitat of fin whales is ca. 11 percent of the western Mediterranean Sea surface and seasonal recurrent areas were clearly shown. The results also displayed a strong seasonality in habitat size and locations as well as high year-to-year variations (40 percent to 50 percent), which is essential to assess migration patterns and suggest sound protection measures. (Publications Office of the European Union. JRC65351. doi:10.3354/meps09810 (http://publications.jrc.ec.europa.eu/repository/handle/JRC65351))

Geographic bounding box: 46° N, 19° E, 35.1° S, -6° W

Coordinate Reference System: ETRS89