JRC Dataset

EMIS - MERIS Monthly mean Surface productive layer (Euphotic Depth) (2km) in m

Description:

Surface productive layer (zeu in m at 2km resolution): The surface productive layer or euphotic zone represents the upper part of the water column that is illuminated by the sun down to the 1% light level. It is a surface layer where most of the primary production occurs.

Contributors:

- Melin, Frederic frederic.melin@ec.europa.eu

How to cite:

Melin, Frederic(2013): EMIS - MERIS Monthly mean Surface productive layer (Euphotic Depth) (2km) in m. European Commission, Joint Research Centre (JRC) [Dataset] PID: http://data.europa.eu/89h/71dac67a-8a40-4f47-ac99-4ef0c1b8bc96

Keywords:

Environmental monitoring facilities, GIS digital format, Oceanographic geographical features, Protected sites, climate change, coastal environment, environmental data, marine environment, marine monitoring, ocean color, satellite observations, sea water protection, surface productive layer

Related resources:

Data access

EMIS - Download access (EMIS_M_ZEU)

Direct NetCDF download

http://emis.jrc.ec.europa.eu/emis/satellite/2km/

Additional information:

Last Modified: 2013-06-11

Issue date: 2013-08-29

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

Temporal coverage: From: 2002-05-01 – To:

Language: English

Data theme(s): Environment

EuroVoc domain(s): 36 SCIENCE; 52 ENVIRONMENT

EuroVoc concept(s): environmental monitoring; ocean; oceanography; protected area

Identifier: http://data.europa.eu/89h/71dac67a-8a40-4f47-ac99-4ef0c1b8bc96

Geographic information:

Lineage: General information: Monthly mean euphotic depth (in meter) as derived from the ocean colour MERIS (Medium Resolution Imaging Spectrometer) sensor (note that the product is called 'surface productive layer'). Processing information: Euphotic depth data products are derived from the MERIS sensor on board the European Space Agency (ESA)'s Envisat platform, and processed using the NASA software package SeaDAS 6.4. The product is calculated according to a Quasi-Analytical Algorithm (QAA; Lee et al. 2007) in which vertical attenuation coefficient of the sub-surface light is modeled by the inherent optical properties of the water. Temporal characteristics: The product is a monthly mean at 2 km resolution, covering the time period between May 2002 to September 2011. Description of observation methods/instruments: The satellite-derived euphotic depth product provides a measure of the ocean depth below which light available is insufficient to support significant photosynthetic activity. It is the

depth at which the visible light (400 – 700 nm range) reduces to 1% of the light incident at the ocean surface. It is a measure of water quality, as well as a important variable to estimate water column primary production. Quality/accuracy/calibration information: Using field measurements in different part of the world's ocean, the average percentage error in the retrieval of the 1% light depth-level was calculated as ca. 14% (Lee et al.2007). References: Z Lee et al. 2007. Euphotic zone depth: Its derivation and implication to ocean-color remote sensing. J. Geophys. Res. 112, C03009, DOI: 10.1029/2006JC003802

Geographic bounding box: 70.0° N, 42.0° E, 10.0° S, -30.0° W

Coordinate Reference System: ETRS89