### PRODUCT DATA SHEET

**ATLANTIC - EUROPEAN NORTH WEST SHELF - OCEAN BIOGEOCHEMISTRY ANALYSIS AND FORECAST**

**PRODUCT IDENTIFIER**
NORTHWESTSHELF_ANALYSIS_FORECAST_BIO_004_002_b

**GEOGRAPHICAL COVERAGE**

<table>
<thead>
<tr>
<th>Latitude</th>
<th>Longitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>65.00</td>
<td>13.00</td>
</tr>
<tr>
<td>-20.00</td>
<td>40.00</td>
</tr>
</tbody>
</table>

Areas:
- north-west-shelf-seas

**VARIABLES**
- mass_concentration_of_chlorophyll_a_in_sea_water (CHL)
- mole_concentration_of_phytoplankton_expressed_as_carbon_in_sea_water (PHYC)
- mole_concentration_of_dissolved_molecular_oxygen_in_sea_water (O2)
- mole_concentration_of_nitrate_in_sea_water (NO3)
- mole_concentration_of_phosphate_in_sea_water (PO4)
- net_primary_production_of_biomass_expressed_as_carbon_per_unit_volume_in_sea_water (PP)
- volume_beam_attenuation_coefficient_of_radiative_flux_in_sea_water
- net_primary_productivity_of_carbon

**OBSERVATION/MODELS**
- numerical-model

**PRODUCT TYPE**
- near-real-time forecast

**PROCESSING LEVEL**
- L4

**DATA ASSIMILATION**
- None

**SPATIAL RESOLUTION**
- 0.111degree x 0.067degree

**VERTICAL COVERAGE (m)**
- from -5000 to 0 (24 levels)

**COORDINATE REFERENCE SYSTEM**
- WGS 84 / Plate Carree (EPSG 32662)

**FEATURE TYPE**
- Grid

**TEMPORAL COVERAGE**
- from 2018-01-01 to Present

**TEMPORAL RESOLUTION**
- daily-mean

**UPDATE FREQUENCY**
- daily (daily at 12:00 UTC)
<table>
<thead>
<tr>
<th>PRODUCTION UNIT</th>
<th>NWS-METOFFICE-EXETER-UK</th>
</tr>
</thead>
<tbody>
<tr>
<td>ORIGINAL FILE FORMAT</td>
<td>NetCDF-4</td>
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</tbody>
</table>
ATLANTIC - EUROPEAN NORTH WEST SHELF - OCEAN BIOGEOCHEMISTRY ANALYSIS AND FORECAST

Short description

The ocean biogeochemistry analysis and forecast for the North-West European Shelf is produced using the European Regional Seas Ecosystem Model (ERSEM), coupled online to the forecasting ocean assimilation model at 7 km horizontal resolution, NEMO-NEMOVAR. ERSEM (Butenschön et al. 2016) is developed and maintained at Plymouth Marine Laboratory. The description of the model and its configuration, including the products validation is provided in the CMEMS-NWS-QUID-004-002-b. Products are provided as daily 25-hour, de-tided, averages. The datasets available are concentration of chlorophyll, nitrate, phosphate, oxygen, phytoplankton biomass, net primary production, light attenuation coefficient, pH and the partial pressure of CO2. All, as multi-level variables, are interpolated from the model 51 hybrid s-sigma terrain-following system to 24 standard geopotential depths (z-levels). Grid-points near to the model boundaries are masked. The product is updated daily, providing a 6-day forecast and the previous 1-day hindcast. See CMEMS-NWS-PUM-004-002 for details.

Associated products:

This model is coupled with a hydrodynamic model (NEMO) available as CMEMS product NORTHWESTSHELF_ANALYSIS_FORECAST_PHYS_004_001_b. A reanalysis product is available from: NORTHWESTSHELF_REANALYSIS_BIO_004_011.

REFERENCES