PRODUCT USER MANUAL

For Mediterranean Sea Biogeochemical Analysis and Forecasting Product

MEDSEA_ANALYSISFORECAST_BGC_006_014

Issue: 2.4

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RECORD TABLE

Issue	Date	§	Description of Change	Author	Validated By
1.0	25/09/2017	all	Initial version	R. Lecci, G. Bolzon, S. Salon, G. Cossarini	
1.1	30/04/2018	all	Update after v4.1	R. Lecci, G. Bolzon, S. Salon, G. Cossarini	
1.2	31/05/2018	all	Update of section III	R. Lecci	
1.3	21/01/2019	all	New template and inclusion of new datasets	R. Lecci, G. Bolzon, S. Salon, G. Cossarini	
1.4	06/12/2019	all	New datasets	R. Lecci, G. Bolzon, S. Salon, G. Cossarini	C. Derval
2.0	15/01/2021	all	New product and new datasets	R. Lecci, G. Bolzon, S. Salon, G. Cossarini	C. Derval
2.1	10/09/2021	all	Upgrade of forcing	R. Lecci, G. Bolzon, S. Salon	C. Derval
2.2	29/11/2022	all	Quality improvement and additional dataset	R. Lecci, G. Bolzon, S. Salon	Copernicus Marine Product Management
2.3	30/11/2023	all	Updated datasets	R. Lecci, G. Bolzon, S. Salon	
2.4	26/11/2024	all	Re-delivery of entire time series from 2 years before present	R. Lecci, G. Bolzon, S. Salon, G. Cossarini	Copernicus Marine Product Management

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GLOSSARY AND ABBREVIATIONS

Analysis (Numerical)	a detailed study of the state of the ocean done in Near real Time based on observations and numerical model. The operational prediction centre produces 3D time-space analysis systems. A long series of analyses is of great utility for studying the behavior of the ocean system.
BFM	Biogeochemical Flux Model
CF	Climate Forecast (convention for NetCDF)
CHL	Chlorophyll
CMEMS	Copernicus Marine Environment Monitoring Service
DIC	Dissolved Inorganic Carbon
FAQ	Frequently Asked Question
Forecast (Numerical)	a computer forecast or prediction based on equations governing the motions and the forces affecting motion of fluids. The equations are based, or initialized, on specified ocean conditions at a certain place and time (NOAA Glossary).
ICNP	In situ Chlorophyll and Nitrate Profiles
Med/MED	Mediterranean
MFC	Monitoring and Forecasting Centre
NetCDF	Network Common Data Form
NOAA	National Oceanic and Atmospheric Administration
OCTAC	Ocean Color Thematic Assembly Centre
OGS	Istituto Nazionale di Oceanografia e di Geofisica Sperimentale
pCO2	partial pressure of carbon dioxide
PFT	Plankton Functional Types
pH	potential of Hydrogen
PU	Production Unit
3DVAR	Three-Dimensional Variational

DATA ACCESS

After registration, you will be able to download our data. To assist you, our HelpCenter is available, and more specifically its section about download.

Information on operational issues on products and services can be found on our User Notification Service. If you have any questions, please contact us.

I INTRODUCTION

I.1 Summary

This document is the user manual for the Copernicus Marine analysis and forecast product **MEDSEA_ANALYSISFORECAST_BGC_006_014**. An archive of analysis over the last two years up to real-time is available on the Marine Data Store.

The product is composed by 3D daily and monthly mean concentration of chlorophyll, nitrate, phosphate, ammonium, silicate, primary production, oxygen, phytoplankton carbon biomass and relative four functional types (PFT), zooplankton carbon biomass, pH, dissolved inorganic carbon, alkalinity, and 2D daily and monthly mean of surface partial pressure of CO2, surface flux of CO2, and light attenuation coefficient.

MEDSEA_ANALYSISFORECAST_BGC_006_014 product is organised in 13 datasets:

- 6 contain the monthly mean fields for all the variables
  - **cmems_mod_med_bgc-bio_anfc_4.2km_P1M-m**
  - **cmems_mod_med_bgc-car_anfc_4.2km_P1M-m**
  - **cmems_mod_med_bgc-co2_anfc_4.2km_P1M-m**
  - **cmems_mod_med_bgc-nut_anfc_4.2km_P1M-m**
  - **cmems_mod_med_bgc-pft_anfc_4.2km_P1M-m**
  - **cmems_mod_med_bgc-optics_anfc_4.2km_P1M-m**
- 6 contain the daily mean fields for all the variables
  - **cmems_mod_med_bgc-bio_anfc_4.2km_P1D-m**
  - **cmems_mod_med_bgc-car_anfc_4.2km_P1D-m**
  - **cmems_mod_med_bgc-co2_anfc_4.2km_P1D-m**
  - **cmems_mod_med_bgc-nut_anfc_4.2km_P1D-m**
  - **cmems_mod_med_bgc-pft_anfc_4.2km_P1D-m**
  - **cmems_mod_med_bgc-optics_anfc_4.2km_P1D-m**
- 1 contains the static fields for the system (coordinates, mask, and bathymetry): **cmems_mod_med_bgc_anfc_4.2km_static**

The product is published on the Copernicus Marine dissemination server after automatic and human quality controls. Files downloaded are in NetCDF format.

Disclaimer: The quality of the product may vary during the proposed time series depending on the possible update of the system.

Information on operational issues on products and services can be found on our User Notification Service. If you have any questions, please contact us.

I.2 History of changes

Date	Description
21.01.2019	New template and inclusion of new datasets
06.12.2019	New datasets
15.01.2021	New product and new datasets
10.09.2021	Upgrade of forcing
29.11.2022	Quality improvement and additional dataset
30.11.2023	Updated datasets including 8 additional new variables
26.11.2024	Re-delivery of entire time series from 2 years before present for quality improvement and upstream data change

II DESCRIPTION OF THE PRODUCT SPECIFICATION

II.1 General Information

Product Lines	MEDSEA_ANALYSISFORECAST_BGC_006_014	
Geographical coverage	5.541667°W → 36.29167°E; 30.1875°N → 45.97917°N	
Variables	Nitrate Phosphate Ammonium Silicate Phytoplankton Carbon Biomass Zooplankton Carbon Biomass Chlorophyll Primary Production Oxygen pH Dissolved Inorganic Carbon Alkalinity Surface partial pressure of CO2 Surface CO2 flux Light attenuation coefficient Diatoms carbon biomass Diatoms chlorophyll concentration Nanoflagellates carbon biomass Nanoflagellates chlorophyll concentration Picophytoplankton carbon biomass Picophytoplankton chlorophyll concentration Dinoflagellates carbon biomass Dinoflagellates chlorophyll concentration	
Product Type	**Analysis**	**Forecast**
Update frequency	Weekly	Daily
Available time series	last two years up to real-time	10-days forecast

Target delivery time	On Tuesday at 22:00 UTC	Daily at 22:00 UTC
Temporal resolution	• cmems_mod_med_bgc-bio_anfc_4.2km_P1D-m, cmems_mod_med_bgc-car_anfc_4.2km_P1D-m, cmems_mod_med_bgc-co2_anfc_4.2km_P1D-m, cmems_mod_med_bgc-nut_anfc_4.2km_P1D-m, cmems_mod_med_bgc-pft_anfc_4.2km_P1D-m, cmems_mod_med_bgc-optics_anfc_4.2km_P1D-m: daily mean • cmems_mod_med_bgc-bio_anfc_4.2km_P1M-m, cmems_mod_med_bgc-car_anfc_4.2km_P1M-m, cmems_mod_med_bgc-co2_anfc_4.2km_P1M-m, cmems_mod_med_bgc-nut_anfc_4.2km_P1M-m, cmems_mod_med_bgc-pft_anfc_4.2km_P1M-m, cmems_mod_med_bgc-optics_anfc_4.2km_P1M-m: monthly mean	
Horizontal resolution	1/24 °	
Number of vertical levels	125	
Format	NetCDF CF1.0	
Delivery mechanisms	MDS	

Table 1: MED-MFC Real Time products

The runtime schedule:

MEDSEA_ANALYSISFORECAST_BGC_006_014

The MedBFM Production follows a split temporal scheme: a weekly assimilation/analysis and a daily forecast.

The system produces seven days of analysis (weekly on Tuesday) with the assimilation of surface chlorophyll and of vertical profiles of chlorophyll, nitrate, and oxygen. One day of hindcast and ten days of forecast are produced daily.

II.2 Details of datasets

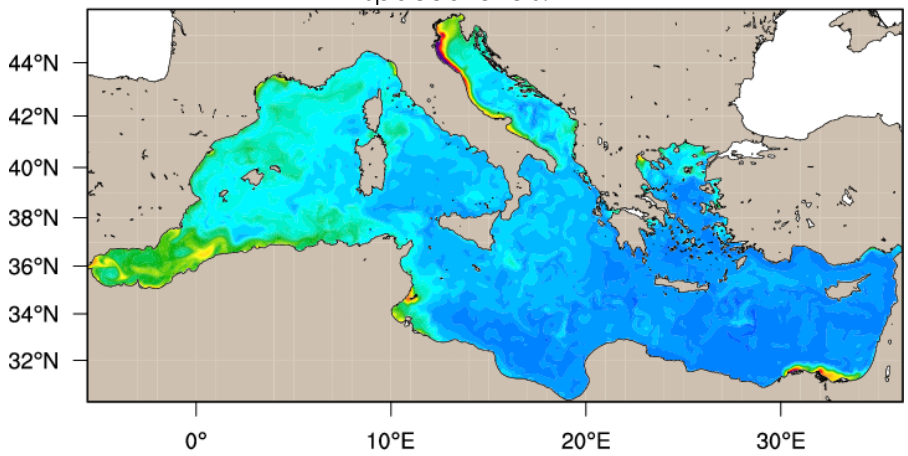
MEDSEA_ANALYSISFORECAST_BGC_006_014
Datasets: • **cmems_mod_med_bgc-bio_anfc_4.2km_P1M-m** • **cmems_mod_med_bgc-car_anfc_4.2km_P1M-m** • **cmems_mod_med_bgc-co2_anfc_4.2km_P1M-m** • **cmems_mod_med_bgc-nut_anfc_4.2km_P1M-m** • **cmems_mod_med_bgc-pft_anfc_4.2km_P1M-m** • **cmems_mod_med_bgc-optics_anfc_4.2km_P1M-m** contain the monthly mean fields for all the variables • **cmems_mod_med_bgc-bio_anfc_4.2km_P1D-m** • **cmems_mod_med_bgc-car_anfc_4.2km_P1D-m** • **cmems_mod_med_bgc-co2_anfc_4.2km_P1D-m** • **cmems_mod_med_bgc-nut_anfc_4.2km_P1D-m** • **cmems_mod_med_bgc-pft_anfc_4.2km_P1D-m** • **cmems_mod_med_bgc-optics_anfc_4.2km_P1D-m** contain the daily mean fields for all the variables • **cmems_mod_med_bgc_anfc_4.2km_static** contains the static fields for the system: coordinates, mean sea surface level, mask, and bathymetry
Variables name in the NetCDF file and Unit: Long_name & Standard_name
no3 [mmol m-3] Nitrate mole_concentration_of_nitrate_in_sea_water
po4 [mmol m-3] Phosphate mole_concentration_of_phosphate_in_sea_water
nh4 [mmol m-3] Ammonium mole_concentration_of_ammonium_in_sea_water
si [mmol m-3] Silicate mole_concentration_of_silicate_in_sea_water
phyc [mmol m-3] Phytoplankton Carbon Biomass mole_concentration_of_phytoplankton_expressed_as_carbon_in_sea_water
zooc [mmol m-3] Zooplankton Carbon Biomass mole_concentration_of_zooplankton_expressed_as_carbon_in_sea_water
chl [mg m-3]

Chlorophyll mass_concentration_of_chlorophyll_a_in_sea_water
nppv [mg m-3 day-1] Net Primary Production net_primary_production_of_biomass_expressed_as_carbon_per_unit_volume_in_sea_water
o2 [mmol m-3] Dissolved oxygen mole_concentration_of_dissolved_molecular_oxygen_in_sea_water
ph [1] Ocean pH sea_water_ph_reported_on_total_scale
dissic [mol m-3] Dissolved Inorganic Carbon mole_concentration_of_dissolved_inorganic_carbon_in_sea_water
talk [mol m-3] Alkalinity sea_water_alkalinity_expressed_as_mole_equivalent
spco2 [Pa] Surface partial pressure of CO2 surface_partial_pressure_of_carbon_dioxide_in_sea_water
fgco2 [kg m-2 s-1] Surface CO2 flux surface_downward_mass_flux_of_carbon_dioxide_expressed_as_carbon
kd490 [m-1] Diffuse attenuation coefficient of the downwelling irradiance at 490 nm volume_attenuation_coefficient_of_downwelling_radiative_flux_in_sea_water_490
diatoC [mmol m-3] Diatoms Carbon Biomass mole_concentration_of_diatoms_expressed_as_carbon_in_sea_water
diatoChla [mg m-3] Diatoms Chlorophyll concentration mass_concentration_of_diatoms_expressed_as_chlorophyll_in_sea_water
nanoC [mmol m-3] Nanoflagellates Carbon Biomass mole_concentration_of_nanoflagellates_expressed_as_carbon_in_sea_water
nanoChla [mg m-3] Nanoflagellates Chlorophyll concentration mass_concentration_of_nanoflagellates_expressed_as_chlorophyll_in_sea_water
picoC [mmol m-3] Picophytoplankton Carbon Biomass mole_concentration_of_picophytoplankton_expressed_as_carbon_in_sea_water
picoChla [mg m-3] Picophytoplankton Chlorophyll concentration mass_concentration_of_picophytoplankton_expressed_as_chlorophyll_in_sea_water
dinoC [mmol m-3] Dinoflagellates Carbon Biomass mole_concentration_of_dinoflagellates_expressed_as_carbon_in_sea_water
dinoChla [mg m-3] Dinoflagellates Chlorophyll concentration mass_concentration_of_dinoflagellates_expressed_as_chlorophyll_in_sea_water
e1t [m] Cell dimension along X axis
e2t [m]

Cell dimension along Y axis
e3t [m] Cell dimension along Z axis cell_thickness
mask [1] Land-sea mask: 1 = sea ; 0 = land sea_binary_mask
deptho [m] Bathymetry sea_floor_depth_below_geoid
deptho_lev [1] Model level number at sea floor model_level_number_at_sea_floor

Table 2: list of the datasets and variable names and unit for the MEDSEA_ANALYSISFORECAST_BGC_006_014 product

II.3 Production System Description

Domain	MEDSEA (5.54°W – 36.30°E; 30.18°N – 45.98°N)
Resolution and grid	1/24°; regular grid; 1005 x 380
Geographic coverage	This product is over the Mediterranean Area, the horizontal resolution is 1/24 (approx 4 km), the vertical grid is composed of 125 unevenly spaced levels. 
Model Version **Production unit** **Period of validation**	▪ MedBFM4.2 ▪ OGS, Italy ▪ 01.01.2019–31.12.2019

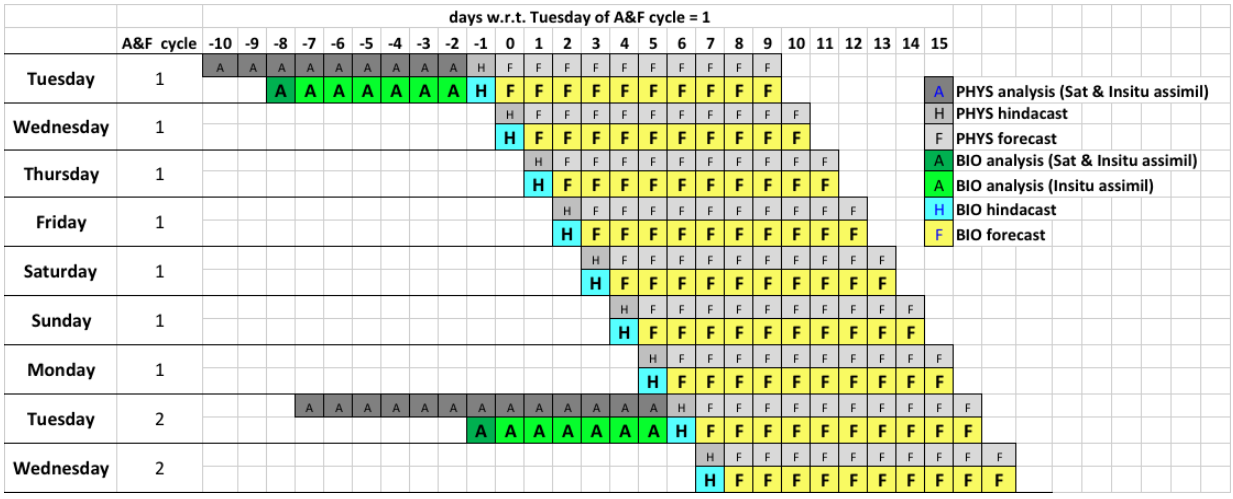
Vertical grid	The product is delivered at the model's native grid, with up to 125 vertical levels: ▪ levels [m]: 1.018237, 3.165747, 5.464963, 7.920377, 10.5366, 13.31838, 16.27059, 19.39821, 22.70639, 26.2004, 29.88564, 33.76767, 37.85219, 42.14504, 46.65221, 51.37986, 56.33429, 61.52196, 66.94949, 72.62369, 78.5515, 84.74004, 91.19663, 97.92873, 104.944, 112.2502, 119.8554, 127.7678, 135.9958, 144.5479, 153.4328, 162.6596, 172.2374, 182.1754, 192.4831, 203.1704, 214.2472, 225.7234, 237.6095, 249.9158, 262.6532, 275.8325, 289.4648, 303.5613, 318.1335, 333.1931, 348.752, 364.822, 381.4154, 398.5447, 416.2223, 434.4611, 453.2738, 472.6735, 492.6735, 513.287, 534.5276, 556.4089, 578.9446, 602.1486, 626.0349, 650.6176, 675.9107, 701.9286, 728.6856, 756.196, 784.4743, 813.5349, 843.3922, 874.0607, 905.5548, 937.8891, 971.0779, 1005.135, 1040.076, 1075.914, 1112.664, 1150.338, 1188.952, 1228.519, 1269.052, 1310.564, 1353.069, 1396.58, 1441.109, 1486.668, 1533.269, 1580.925, 1629.647, 1679.445, 1730.33, 1782.314, 1835.405, 1889.613, 1944.947, 2001.417, 2059.029, 2117.792, 2177.714, 2238.8, 2301.058, 2364.492, 2429.108, 2494.91, 2561.903, 2630.09, 2699.474, 2770.057, 2841.841, 2914.827, 2989.016, 3064.407, 3141.001, 3218.796, 3297.79, 3377.981, 3459.366, 3541.942, 3625.704, 3710.647, 3796.768, 3884.06, 3972.516, 4062.13, 4152.896
Atmospheric forcing	ECMWF atmospheric forcing at 1/10 degrees: 6-hourly analysis; 1 hour for the first 3 days of forecast, 3 hours for the following 3 days of forecast and 6 hours for the last 4 days of forecast
Boundary forcing	The Mediterranean modeling system is forced at the Atlantic side by climatological profiles based on World Ocean Atlas 2018 and GLODAPv2 datasets. The open boundary conditions at the Dardanelles Strait for nitrate, phosphate, silicate, DIC, alkalinity are set to constant values using literature information after a tuning procedure; a radiative condition at the open boundary is set for the other BFM tracers.
Assimilation scheme	3DVarBio (3DVAR)
Assimilated observations	Surface chlorophyll from multi-sensor satellite (MODIS-AQUA, NOAA20-VIIRS, NPP-VIIRS and Sentinel3A-OLCI sensors) data provided by CMEMS OCTAC; in-situ chlorophyll, nitrate, and oxygen profiles (ICNOP) from Biogeochemical Argo floats (provided by CORIOLIS data repository). Reconstructed nitrate profiles from BGC-Argo and PPCon convolutional neural network (Pietropolli et al. 2023)
Initial conditions (spin-up process)	Sub-basin climatological profiles from MedBGCins dataset (Di Biagio et al., 2024) that integrates in-situ aggregated EMODnet data collections (Buga et al., 2018), datasets listed in Lazzari et al. (2016) and Cossarini et al. (2015), and additional data.
Bathymetry	GEBCO 30sec interpolated on the model grid

River run-off and nutrient and carbon discharges	Runoff Rivers input from Perseus dataset High-resolution data of Po River runoff Nutrient and Carbon discharges from Perseus dataset and literature.

The biogeochemical analysis and forecasts for the Mediterranean Sea at 1/24 degree are produced by means of the MedBFM model system (i.e., the physical-biogeochemical OGSTM-BFM model, integrated with the OASIM optics model and coupled with the 3DVarBio assimilation scheme). MedBFM model is run by OGS and uses as physical forcing the outputs of the Med-PHY products. Assimilated observations are (i) surface chlorophyll concentration from satellite observations (provided by the Copernicus Marine-OCTAC); (ii) chlorophyll, nitrate, and oxygen from Biogeochemical Argo floats (provided by CORIOLIS); (iii) reconstructed nitrate profiles from BGC-Argo and PPCon convolutional neural network (Pietropolli et al. 2023).

II.3.1.1 Production Cycle

MEDSEA_ANALYSISFORECAST_BGC_006_014 analysis and forecast products are updated daily within 22 UTC. The production is composed by 7 days of analysis (A, with data assimilation), 1 day of hindcasts (H) and 10 days of forecast (F) for the Tuesday run; 1 day of hindcast (H) and 10 days of forecast (F) daily. An example of aggregated product is shown in the Figure below.



II.4 Processing information

II.4.1 Update Time

Daily datasets are updated at 22:00 UTC.

The monthly dataset is updated monthly on the 20th (addition of the monthly mean of the previous month).

II.4.2 Temporal extent of analysis and forecast stored on delivery mechanism

An archive of analysis over the last two years up to real-time is available.

II.4.3 Time averaging

For the monthly dataset, the fields are monthly means over the calendar month (first to last day of the month).

For daily datasets,

- **cmems_mod_med_bgc-bio_anfc_4.2km_P1D-m**
- **cmems_mod_med_bgc-car_anfc_4.2km_P1D-m**
- **cmems_mod_med_bgc-co2_anfc_4.2km_P1D-m**
- **cmems_mod_med_bgc-nut_anfc_4.2km_P1D-m**
- **cmems_mod_med_bgc-pft_anfc_4.2km_P1D-m**

the fields are daily means over a day (midnight to midnight, centered at midday).

For the daily optical one:

- **cmems_mod_med_bgc-optics_anfc_4.2km_P1D-m**

the fields are means over 4 hours (from 10AM to 2PM, centered at midday).

III. FILE FORMAT

The products are stored using the NetCDF format. To know more about the NetCDF format, please follow this link:

What is the format of Copernicus Marine products ? NetCDF

To understand the differences between netCDF and Zarr, please consult this article:

how-to-choose-between-netcdf-and-zarr-format-using-the-toolbox

IV FILES NOMENCLATURE

Information about nomenclature of files when downloaded can be found in this article: " How is defined the nomenclature of Copernicus Marine data? | Copernicus Marine Help Center "

IV.1 Nomenclature of files when downloaded through the Web Portal Subset Service

MEDSEA_ANALYSISFORECAST_BGC_006_014 files nomenclature when downloaded through the Copernicus Marine Web Portal Subsetr is based on product dataset name and a numerical reference related to the request date on the portal.

The scheme is: **datasetname_nnnnnnnnnnnn.nc**

where:

- **datasetname**: as described previously
- **nnnnnnnnnnnn**: 13-digit integer corresponding to the current time (download time) in milliseconds since January 1, 1970 midnight UTC.
- **.nc**: standard NetCDF filename extension.

Example: cmems_mod_med_bgc-bio_anfc_4.2km_P1D-m_1303461772348.nc

IV.2 Nomenclature of original files

MEDSEA_ANALYSISFORECAST_BGC_006_014 files nomenclature when downloaded through the Copernicus Marine FTP service is based as follows:

{valid date}_{freq flag}-{producer}--{parameter}-{config}-{region}-{bul date}_{product type}-sv{file version}.nc

where

- **valid date** YYYYMMDD is the validity day of the data in the file
- **freq flag** is the frequency of data values in the file (h = hourly, hts = hourly time series, d = daily, m=monthly)
- **producer** is a short version of the CMS production unit
- **config** identifies the producing system and configuration
- **region** is a maximum six letter code for the region
- **parameter** is a four-letter code for the parameter or parameter set from Standard BODC.
- **bul date** bYYYYMMDD is the bulletin date the product was produced
- **product type** is a two-letter code for the product type, for example fc for forecast, an for analysis and sm for hindcast.

- **file version** is xx.yy where xx is the CMS version and yy is an incremental version number

Table 1 shows the nomenclature for the MEDSEA_ANALYSISFORECAST_BGC_006_014 products.

Table 1 Description of the nomenclature for MEDSEA_ANALYSISFORECAST_BGC_006_014

valid date	YYYYMMDD
freq flag	m (monthly) d (daily)
producer	OGS
config	MedBFM4
region	MED
parameter	NUTR PFTC BIOL CARB CO2F EXCO
bul date	bYYYYMMDD
product type	fc (forecast) an (analysis) sm (hindcast)
file version	09.00

Example for an analysis file:

20190501_d-OGS--PFTC-MedBFM4-MED-b20210112_an-sv09.00.nc

This is the mean field of biogeochemistry centered at 12:00 UTC of the 1st May 2019, and the time coverage is from midnight (00:00 UTC) of the 1st May 2019 to midnight (00:00 UTC) of the 2nd May 2019.

IV.3 Other information: mean centre of Products, land mask value, missing value

The missing value for this product is: 1.e+20

Land mask is equal to "_FillValue" (see variable attribute on NetCDF file).

Real_Value = (Display_Value X scale_factor) + add_offset

The BGC forecasts are using the NetCDF4 format without offset nor scale factors.

In the CMEMS online system data from the latest 2 years (running window) are available via these download interfaces: Subsetter and FTP download

IV.4 File size

DATASET NAME	FILE NAME	DIMENSION [MB]
cmems_mod_med_bgc-nut_anfc_4.2km_P1D-m	{date1}_d-OGS--NUTR-MedBFM4-MED-b{date2}_fc-sv09.00.nc {date1}_d-OGS--NUTR-MedBFM4-MED-b{date2}_sm-sv09.00.nc {date1}_d-OGS--NUTR-MedBFM4-MED-b{date2}_an-sv09.00.nc	120
cmems_mod_med_bgc-pft_anfc_4.2km_P1D-m	{date1}_d-OGS--PFTC-MedBFM4-MED-b{date2}_fc- sv09.00.nc {date1}_d-OGS-- PFTC-MedBFM4-MED-b{date2}_sm- sv09.00.nc {date1}_d-OGS--PFTC-MedBFM4-MED-b{date2}_an- sv09.00.nc	335
cmems_mod_med_bgc-bio_anfc_4.2km_P1D-m	{date1}_d-OGS--BIOL-MedBFM4-MED-b{date2}_fc- sv09.00.nc {date1}_d-OGS--BIOL-MedBFM4-MED-b{date2}_sm- sv09.00.nc {date1}_d-OGS--BIOL-MedBFM4-MED-b{date2}_an- sv09.00.nc	61
cmems_mod_med_bgc-car_anfc_4.2km_P1D-m	{date1}_d-OGS--CARB-MedBFM4-MED-b{date2}_fc- sv09.00.nc {date1}_d-OGS--CARB-MedBFM4-MED-b{date2}_sm- sv09.00.nc {date1}_d-OGS--CARB-MedBFM4-MED-b{date2}_an- sv09.00.nc	64
cmems_mod_med_bgc-co2_anfc_4.2km_P1D-m	{date1}_d-OGS--CO2F-MedBFM4-MED-b{date2}_fc- sv09.00.nc {date1}_d-OGS--CO2F-MedBFM4-MED-b{date2}_sm- sv09.00.nc {date1}_d-OGS--CO2F-MedBFM4-MED-b{date2}_an- sv09.00.nc	1

cmems_mod_med_bgc-optics_anfc_4.2km_P1D-m	{date1}_d-OGS--EXCO-MedBFM4-MED-b{date2}_fc- sv09.00.nc {date1}_d-OGS--EXCO-MedBFM4-MED-b{date2}_sm- sv09.00.nc {date1}_d-OGS--EXCO-MedBFM4-MED-b{date2}_an- sv09.00.nc	1
cmems_mod_med_bgc-nut_anfc_4.2km_P1M-m	{date1}_m-OGS--NUTR-MedBFM4-MED-b{date2}_an-sv09.00.nc	120
cmems_mod_med_bgc-pft_anfc_4.2km_P1M-m	{date1}_m-OGS--PFTC-MedBFM4-MED-b{date2}_an-sv09.00.nc	335
cmems_mod_med_bgc-bio_anfc_4.2km_P1M-m	{date1}_m-OGS--BIOL-MedBFM4-MED-b{date2}_an- sv09.00.nc	61
cmems_mod_med_bgc-car_anfc_4.2km_P1M-m	{date1}_m-OGS--CARB-MedBFM4-MED-b{date2}_an- sv09.00.nc	64
cmems_mod_med_bgc-co2_anfc_4.2km_P1M-m	{date1}_m-OGS--CO2F-MedBFM4-MED-b{date2}_an- sv09.00.nc	1
cmems_mod_med_bgc-optics_anfc_4.2km_P1M-m	{date1}_m-OGS--EXCO-MedBFM4-MED-b{date2}_an- sv09.00.nc	1
cmems_mod_med_bgc_anfc_4.2km_static	MED-MFC_006_014_${field}.nc	5

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