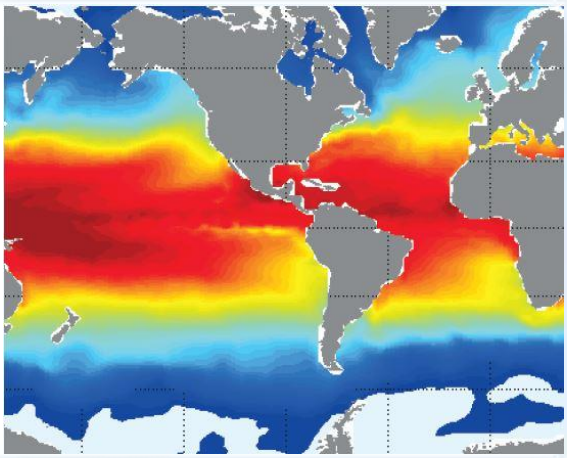
NATIVE GRID PRODUCT - ANALYSIS AND FORECAST - GLOBAL OCEAN - BIO - 1/4°



This product contains analysis and forecast of the Global Ocean biogeochemistry at 1/4° (~28km at the equator) - Chlorophyll, Nitrate, Phosphate, Oxygen, Phytoplankton Carbon Biomass, Primary Production - with a weekly update of the latest ocean fields. The numerical files are displayed on the native grid ¼°.

Reference: BIO4V1R2

• Variables	NO3 Nitrate	mmol N.m-3
	NH4 Ammonium	mol C.L-1
	PO4 Phosphate	mmol P.m-3
	Si Silicate	mmol Si.m-3
	Fer Iron	mmol Fe.m-3
	NCHL Nanophytoplankton	mg Chl.m-3
	Chlorophyll	mg Chl.m-3
	DCHL Diatoms Chlorophyll	mol C.L-1
	PHY Nanophytoplankton carbone	mmol C.m-3
	biomass	mmol .m-3
	PHY2 Diatoms carbon biomass	g/day/m3
	O2 Oxygen	mmol.m-3
	PPn Nanophytoplankton primary	g/m3/day
	production	
	PPd Diatoms primary production	g/m3/day
• Geographical coverage	Global Ocean (180°W-180°E; 77°S-90°N)	
• Grid and spatial horizontal resolution	1/4°~28km at the equator on ORCA025 Native Grid (ARAKAWA C, no interpolation)	
• Spatial vertical resolution	50 vertical levels (from -5500.0m to 0.0m)	
• Temporal resolution	Weekly mean	
• Temporal coverage	Analyses (01/01/2012) up to 1 week forecast	
• Update frequency	Weekly update	

MERCATOR OCEAN INTERNATIONAL

Domain: Global Ocean (180°W-180°E ; 77°S-90°N)
Physic/Biogeochemistry: Biogeochemistry
Configuration free model/ Tide&Sea-Ice: cf **GLO12V3R1**

Code and Version: **PISCES-Nemo3.2 for Biogeochemistry forced by GLO12V3R1 coarsened to ¼° offline daily version NEMO3.1 for physic.**
Grid and resolution: ORCA025 [**1/4°**; 50 levels]
Grid size: **1442*1022*50** (partial steps)
Data assimilation: No**/ Update**: Weekly
Bathymetry: cf **GLO12V3R1 coarsened at ¼°**
Time step: 1800s (tracers and Biogeochemistry)

Reference BIO4V1R2	
Forcing and Data Assimilation	
Data assimilation	No assimilation of biogeochemical data but forcing with GLO12V3R1 which has data assimilation
Data assimilation scheme	No for BIO
Data assimilated	No for BIO
Atmospheric or Biogeochemical forcings:	Atmospheric forcings: Cf GLO12V3R1 Biogeochemical forcings: Iron (Fe) input through sediment and wind.
Runoff: **Open boundary conditions**	For physics: Cf GLO12V3R1; DIC, DOC et POC- inputs through rivers No
Initial Conditions and Relaxation	
Initial Conditions	Levitus WOA (2001) for NO3, O2, PO4, Si; GLODAP for DIC and Alkalinity; Restart from a 3000 years long run for Iron (Fe) and DOC;
Surface relaxation	No
Water column (3D) relaxation	No
Convection	Cf GLO12V3R1
Parametrisation	
Surface Physics parametrisation	Cf GLO12V3R1
Bottom friction	Cf GLO12V3R1
Lateral friction	Cf GLO12V3R1
Vertical mixing	Cf GLO12V3R1 ; weekly average of log10(kz) is performed
Advection	Cf GLO12V3R1
Tracer diffusion	Cf GLO12V3R1
Momentum diffusion	Cf GLO12V3R1
Horizontal diffusion coefficient for tracers and momentum	Cf GLO12V3R1
Vertical diffusion coefficient for tracers and momentum	Cf GLO12V3R1

MERCATOR OCEAN INTERNATIONAL