Met Office

NWS-Ecosystem

Science configuration referred to as FOAM-NWSEco and **AMM7** (Atlantic Margin Model 7km)

North-West European shelf ocean (physical and ecosystem) analysis and 6-day forecast

Technical product details

Source

Numerical models

Spatial extent

Atlantic North-west European Shelf. Lat 40.07° to 65°. Lon –19.89° to 13°

Grid resolution

Regular grid, 7 km grid cells. 0.111° x 0.067°

Temporal resolution

Daily

Elevation (depth) levels

24 levels:
0, 3, 10, 15, 20, 30, 50, 75, 100, 125, 150, 200, 250, 300, 400, 500, 600, 750, 1000, 1500, 2000, 3000, 4000, 5000m

Variables

Physical variables

bottom = sea_water_potential_temperature_at_sea_floor
mlotst = ocean_mixed_layer_thickness_defined_by_sigma_theta
so = sea_water_salinity
thetao = sea_water_potential_temperature
uo = eastward_sea_water_velocity
vo = northward_sea_water_velocity
zos = sea_surface_height_above_geoid

Biogeochemistry variables

attn = volume_beam_attenuation_coefficient_of_radiative_flux_in_sea_water
chl = mass_concentration_of_chlorophyll_a_in_sea_water
no3 = mole_concentration_of_nitrate_in_sea_water
nppv = net_primary_production_of_biomass_expressed_as_carbon_per_unit_volume_in_sea_water
o2 = mole_concentration_of_dissolved_molecular_oxygen_in_sea_water
ph = sea_water_ph_reported_on_total_scale
phyc = mole_concentration_of_phytoplankton_expressed_as_carbon_in_sea_water
po4 = mole_concentration_of_phosphate_in_sea_water
spco2 = surface_partial_pressure_of_carbon_dioxide_in_sea_water

More information in table below

Filenames

metoffice_foam1_amm7_NWS_${VARIABLE}_ b${BULLETIN_DATE}_dm${VALIDITY_DATE}.nc
where
${VARIABLE} is one of ATTN, BED, CPWC, CUR, DOXY, MLD, NITR, PCO2, PHOS, PHPH, PHYT, PPRD, SAL, SSH, TEM;
${BULLETIN_DATE} is the date the forecast was produced;
${VALIDITY_DATE} is the date the field is valid.

More information in table below

Typical data delivery time

Daily ~0830UTC

Delivery Methods Available

SFTP pull, FTP pull

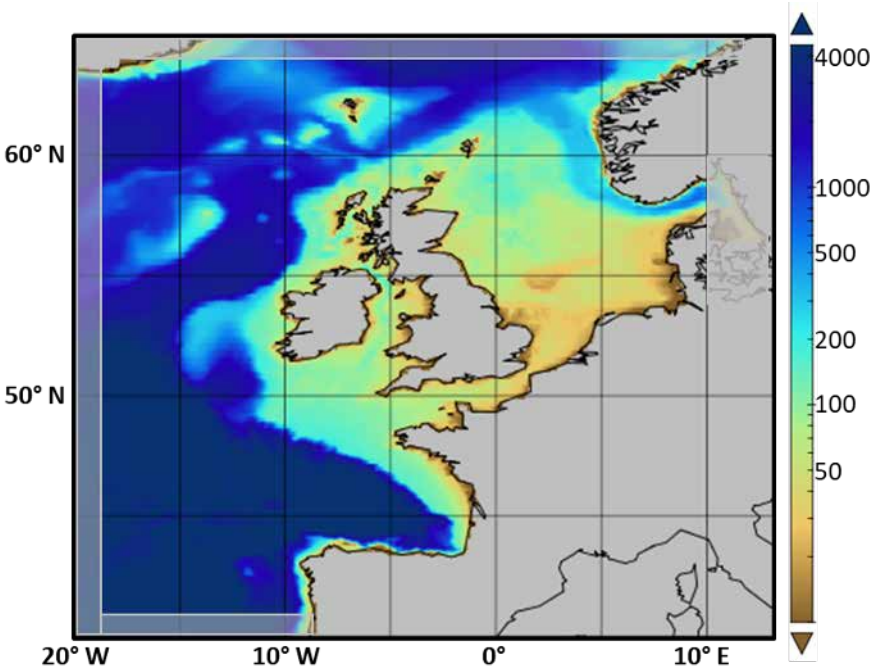
File formats for delivery

NetCDF-4

Frequency of delivery

Daily to FTP server for collection by customer

Further information



Bathymetry of the AMM7 model domain. The grey translucent areas show where the model output is masked.

Filetype	Variables(s)	Description	Averaging	Freq.	Level(s)	Leadtimes
TEM*dm	thetao	potential temperature	25h-mean	daily	24	T-36 -> T+132
SAL*dm	so	salinity	25h-mean	daily	24	T-36 -> T+132
CUR*dm	uo, vo	u- and v-current	25h-mean	daily	24	T-36 -> T+132
BED*dm	bottomT	bottom potential temperature	25h-mean	daily	bottom	T-36 -> T+132
MLD*dm	mlotst	mixed-layer depth	25h-mean	daily	1	T-36 -> T+132
SSH*dm	zos	sea surface height	25h-mean	daily	surface	T-36 -> T+132
ATTN* dm	volume_beam_attenuation_coefficient_of_radiative_flux_in_sea_water	attenuation co-efficient	25h-mean	daily	24	T-36 -> T+132
CPWC* dm	mass_concentration_of_chlorophyll_a_in_sea_water	chlorophyll-A	25h-mean	daily	24	T-36 -> T+132
DOXY* dm	mole_concentration_of_dissolved_molecular_oxygen_in_sea_water	conc. dissolved O_2	25h-mean	daily	24	T-36 -> T+132
NITR* dm	mole_concentration_of_nitrate_in_sea_water	nitrate	25h-mean	daily	24	T-36 -> T+132
PHOS* dm	mole_concentration_of_phosphate_in_sea_water	phosphate	25h-mean	daily	24	T-36 -> T+132
PHPH* dm	sea_water_ph_reported_on_total_scale	pH	25h-mean	daily	24	T-36 -> T+132
PHYT* dm	mole_concentration_of_phytoplankton_expressed_as_carbon_in_sea_water	phytoplankton	25h-mean	daily	24	T-36 -> T+132
PPRD* dm	net_primary_production_of_biomass_expressed_as_carbon_per_unit_volume_in_sea_water	net primary production	25h-mean	daily	24	T-36 -> T+132
PCO2*dm	surface_partial_pressure_of_carbon_dioxide_in_sea_water	partial pressure CO_2	25h-mean	daily	surface	T-36 -> T+132

Table: AMM7 netCDF products sent to UKMCAS via ftp by the Operational Marine Post-Processing Shelf-Seas Suite (MaPP-SS).