



European 6km Wave Model



Wave forecast data

Met Office Wave Modelling

The Met Office runs global and regional wave forecast models to support marine safety and operational decision making.

Met Office configurations are developed to be run using the community wave model WAVEWATCH III™.

The Met Office wave models are forced using wind data from the Met Office Global Atmospheric Hi-Res Model and, where appropriate in regional configurations, currents from the Met Office shelf seas model.

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The global wave configuration is designed to generate accurate forecasts for open waters of the world's oceans and larger seas, whilst regional configurations are run in order to improve accuracy closer to the coast through the use of Spherical Multiple-Cell (SMC) grid refinement. This means that grid points are closer together around the coast than the open ocean, so effectively a higher resolution around the coast.

The European 6km Wave Model is a cut out of the Global Wave Model covering European waters, the area confined by latitudes and longitudes: 65.8° N to 30.2° N and 19.6° W to 41.7° E. As this area is relatively near the coast the model is resolved to 6km within this area, offering a higher resolution cut out of the Global Wave Model. The Wave Model is run to provide a five day outlook for wave characteristics defining height, period and direction of waves within a given sea-state.

Two options are available for the European 6km Wave Model, a full set of parameters as per our Global Wave Model with all time steps at an enhanced 6km resolution for detailed forecasting, or a condensed option with 6-hourly timesteps out to 48hrs and limited parameters for an overview of conditions.

	Parameter	Unit	Timesteps available
1	Significant wave height of combined wind-sea and swells	metres	Hourly to T+48, 00 & 12 UTC runs are extended at a 3-hourly interval to T+120 OR 6-hourly to T+48 for all model runs
2	Peak wave energy period	seconds	Hourly to T+48, 00 & 12 UTC runs are extended at a 3-hourly interval to T+120
3	Mean zero-upcrossing period of combined wind-sea and swells (Significant wave period)	seconds	Hourly to T+48, 00 & 12 UTC runs are extended at a 3-hourly interval to T+120 OR 6 hourly to T+48 for all model runs
4	Mean direction (from) of combined wind-sea and swells	degrees true	Hourly to T+48, 00 & 12 UTC runs are extended at a 3-hourly interval to T+120 OR 6-hourly to T+48 for all model runs
5	Significant wave height of wind-sea	metres	Hourly to T+48, 00 & 12 UTC runs are extended at a 3-hourly interval to T+120 OR 6-hourly to T+48 for all model runs
6	Peak wave energy period of wind-sea	seconds	Hourly to T+48, 00 & 12 UTC runs are extended at a 3-hourly interval to T+120 OR 6-hourly to T+48 for all model runs
7	Mean direction (from) of wind-sea	degrees true	Hourly to T+48, 00 & 12 UTC runs are extended at a 3-hourly interval to T+120 OR 6-hourly to T+48 for all model runs
8	Directional spread of wind-sea	degrees	Hourly to T+48, 00 & 12 UTC runs are extended at a 3-hourly interval to T+120
9	Significant wave height of primary swell waves	metres	Hourly to T+48, 00 & 12 UTC runs are extended at a 3-hourly interval to T+120 OR 6-hourly to T+48 for all model runs

	Parameter	Unit	Timesteps available
10	Peak wave energy period of primary swell waves	seconds	Hourly to T+48, 00 & 12 UTC runs are extended at a 3-hourly interval to T+120 OR 6-hourly to T+48 for all model runs
11	Mean direction (from) of primary swell waves	degrees true	Hourly to T+48, 00 & 12 UTC runs are extended at a 3-hourly interval to T+120 OR 6-hourly to T+48 for all model runs
12	Directional spread of primary swell waves	degrees	Hourly to T+48, 00 & 12 UTC runs are extended at a 3-hourly interval to T+120
13	Significant wave height of secondary swell waves	metres	Hourly to T+48, 00 & 12 UTC runs are extended at a 3-hourly interval to T+120
14	Peak wave energy period of secondary swell waves	seconds	Hourly to T+48, 00 & 12 UTC runs are extended at a 3-hourly interval to T+120
15	Mean direction (from) of secondary swell waves	degrees true	Hourly to T+48, 00 & 12 UTC runs are extended at a 3-hourly interval to T+120
16	Directional spread of secondary swell waves	degrees	Hourly to T+48, 00 & 12 UTC runs are extended at a 3-hourly interval to T+120
17	Significant wave height of tertiary swell waves	metres	Hourly to T+48, 00 & 12 UTC runs are extended at a 3-hourly interval to T+120
18	Peak wave energy period of tertiary swell waves	seconds	Hourly to T+48, 00 & 12 UTC runs are extended at a 3-hourly interval to T+120
19	Mean direction (from) of tertiary swell waves	degrees true	Hourly to T+48, 00 & 12 UTC runs are extended at a 3-hourly interval to T+120
20	Directional spread of tertiary swell waves	degrees	Hourly to T+48, 00 & 12 UTC runs are extended at a 3-hourly interval to T+120



Model run times

00 UTC, 06 UTC, 12 UTC & 18 UTC



Resolution

0.087° N/S by 0.058° E/W (~6km)



Format

GRIB2



Domain

Latitude: 65.8°N to 30.2°N, Longitude: 19.6°W to 41.7°E



Delivery

File transfer protocol (FTP)

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