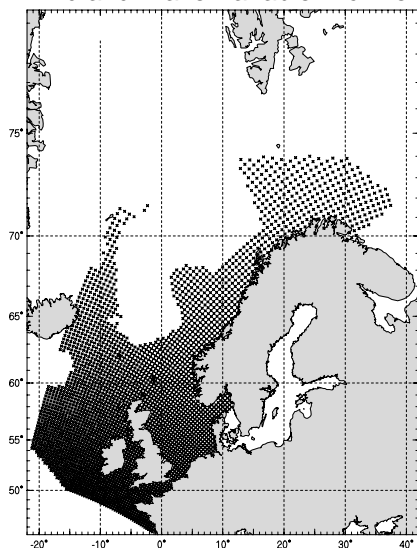


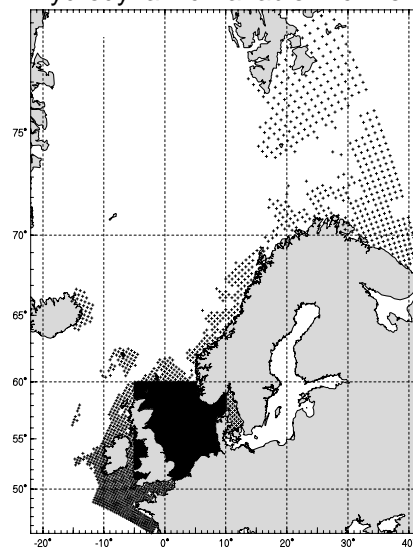
Northern European Metocean Reanalysis

A high resolution 35 year hindcast of
surface winds, sea state, water level and currents

Wind and Wave Variable Archive



Hydrodynamic Variable Archive



Description

Block specific results of comprehensive Metocean hindcast studies supported on a Joint Industry Project (JIP) basis are now available. The first such JIP, NESS (Northern European Storm Study), was launched in 1986 by a consortium of nine major oil companies and two government agencies to develop a definitive database of wind, sea state, water level and current parameters for the North Sea, Norwegian Sea and Northwest Approaches following a hindcast approach using wind, wave and hydrodynamic models considered state-of-the-art in the 1980s. NESS addressed the continuous time and space evolution of the surface wind and wave fields over the winter half of 25-years (October-March 1964-65 to 1988-89), three complete years (1977, 1978, 1979) within the 25 years and 39 summer storms and of storm surge, tide and currents for 250 storms within the 25-year period. In a follow up JIP, NUG (NESS User's Group) the hindcast was expanded to include the continuous period April 1989 to September 1998 with Oceanweather's kinematic wind hindcast methodology and advanced third-generation spectral wave model. The reanalyzed atmospheric forcing for the NESS and NUG period up to March 1995 was applied by Danish Hydraulics to its improved MIKE 21 hydrodynamic model. The hindcast databases have been extensively validated against high quality platform measurements available post-NESS. The hindcast time series at hourly intervals are available at the points archived (see maps) to the end-user and consulting communities on a grid-point specific basis at reasonable cost.

Surface Wind and Sea State Variables

- Wind speed and direction
- Significant wave height, period and direction
- Variance, period and direction of the "sea" spectral partition
- Variance, period and direction of the "swell" spectral partition
- Spectral moments
- Angular spreading parameters

Hydrodynamic Variables

- Total water level
- Total current speed
- Total current direction
- Residual water level
- Residual current speed
- Residual current direction

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