

The Copernicus Marine Environment Services include a regional Arctic Monitoring and Forecasting Center providing forecasts of the ocean, sea ice, biogeochemical and waves variables. In the year 2020 alone, several novelties have been made operationally available:

- A stand-alone sea ice forecast (the neXt generation Sea Ice Model forecast, neXtSIM-F) using the novel Brittle-Bingham-Maxwell rheology. Interpolated from an adaptive triangular mesh with an approximate resolution of 7km to a 3-km resolution grid.
- A tidal and storm surge forecast using the 3D model HYCOM at 3-km.
- A wave hindcast using Met Norway's WAM model at 3-km resolution.

All new products have been quality checked against satellite data, manual ice charts and in situ observations

In 2021 we are working on an upgraded biogeochemical forecast product that includes the Carbon cycle and an upgraded data assimilative physical ocean product at 6 km horizontal resolution and 50 z-isopycnic vertical layers. We will also upgrade both the physical and biogeochemical reanalyses.

The Arctic MFC will also introduce a new Ocean Monitoring indicator for sea ice fluxes in and out of the Arctic.