CHLOROPHYLL-*A*, TOTAL SUSPENDED MATTER AND SEA SURFACE TEMPERATURE MAPS OF THE NORTH SEA AVAILABLE THROUGH THE BELCOLOUR PROJECT

Van Mol Barbara, YoungJe Park, Bouchra Nechad, Fabrice Ovidio and Kevin Ruddick

Management Unit for the North Sea Mathematical Models, Gulledelle 100, B-1200 Brussel, Belgium
E-mail: B.Vanmol@mumm.ac.be

Since the launch of the first Ocean Colour sensors at the end of the previous century, much research has been devoted to transform Top of Atmosphere radiance measurements into reliable concentration maps of oceanographic parameters at the sea surface like e.g. chlorophyll content, total amount of suspended matter, sea surface temperature. While algorithms to determine chlorophyll in clear open water (so-called case 1 waters) are well established because this is the only parameter changing the spectral signal, they fail in coastal and turbid waters where the spectral signal is the result of the optical properties of a variety of constituents. The BELCOLOUR project improved the theoretical base for establishing concentration maps in coastal waters and developed quality control algorithms. Non reliable or unrealistic data are masked out in the final products to avoid misinterpretation of the data. The BELCOLOUR project worked mainly on satellite imagery from the Ocean Colour sensors SeaWiFS, MERIS and MODIS. All satellite data of the North Sea of these sensors (if not completely clouded) have been processed and transformed into quasi-true colour (RGB), chlorophyll (CHL), total suspended matter (TSM) and, for MODIS, sea surface temperature (SST) maps and made available for public through an easy browsing system on http://www.mumm.ac.be/BELCOLOUR.

The satellite data of MERIS and MODIS are processed in near real time in an automated way and the products are presented one day after the acquisition in the Near Real Time Database on the BELCOLOUR website (http://www.mumm.ac.be/BELCOLOUR/EN/Products/NRT/index.php), where they stay for 14 days. Later the data are reprocessed and archived in the BELCOLOUR Image Database (http://www.mumm.ac.be/BELCOLOUR/EN/OCDB/browse.php), also accessible through the BELCOLOUR website.

The images are available for different standard geographical areas (North Sea, Southern North Sea and the Channel, Southern North Sea) with both linear and logarithmical scales and are presented as jpeg-files. Different areas and file-formats can be processed by the Remote Sensing and Ecosystem Modelling team of MUMM on request.