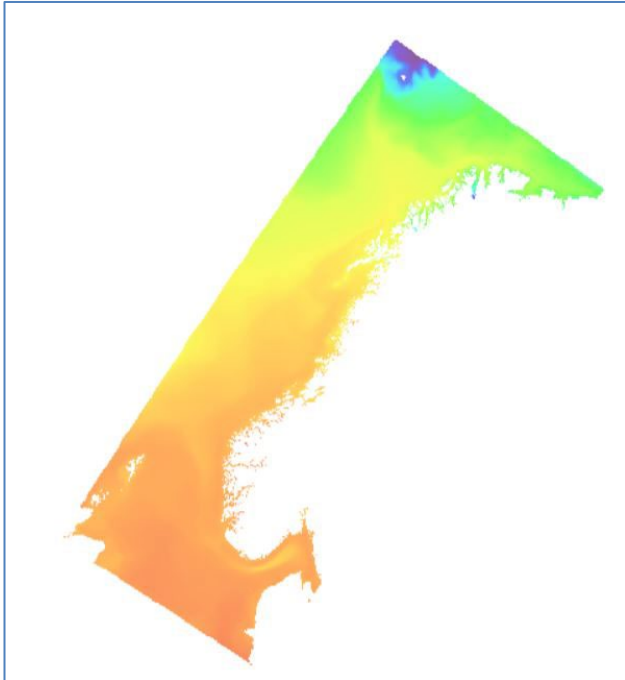


# Product sheet: NorKyst-800 Average sea temperature



## DESCRIPTION

The dataset represents 10 years averaged sea temperature values at the surface, in the water masses (intervals for 5m, 15m, 30m, 50m, 100m, 150m, 200m and 250m), as well as at the seabed. With the current model setup, the distance from the seabed goes from a few cm in shallow water up to 1.5m when the total depth is 100m or more.

Temperatures are given in degrees Celsius.

## PURPOSE/APPLICATION

Sea temperature is important for physical processes in the water masses, including stirring in the water column, which in turn is of great importance for primary production in the sea. The sea temperature affects the growth rate of zooplankton and larvae, among others. It is also important for the distribution of many species and can affect the productivity of the species.

## OWNER/CONTACT PERSON

Institute of Marine Research

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**Academic contact:** Jon Albretsen,  
jon.albretsen@hi.no

## DATASET RESOLUTION

**Resolution:** 800m

**Location accuracy (meters):** 800m

## EXTENT INFORMATION

The dataset covers the coast of mainland Norway and large parts of the sea area beyond. The dataset consists of a total of 10 levels of depth, from surface to seabed.

## SOURCES AND METHOD

Bottom temperature is derived from a ten-year simulation with a three-dimensional, hydrodynamic flow model. The numerical current model underlying ROMS (<http://myroms.org>), is the Institute of Marine Research's main model for Norwegian coastal and fjord areas and has a spatial resolution of 800m x 800m horizontally and 35 vertical, terrain-following calculation levels. The simulation period is a decade from 2013-2022. Based on hourly values, the calculated mean value is calculated.

A more detailed description can be read in Asplin et al. 2020

(<https://link.springer.com/article/10.1007/s10236-020-01378-0>)

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([https://imr.brage.unit.no/imr-xmlui/bitstream/handle/11250/113865/FoH\\_2011\\_02.pdf?sequence=1&isAllowed=y](https://imr.brage.unit.no/imr-xmlui/bitstream/handle/11250/113865/FoH_2011_02.pdf?sequence=1&isAllowed=y)).



## UPDATING AND UPDATING

The oceanographic map products are continuously updated as new input data or new modelling methods that prove to be more realistic are adopted.

Updates do not take place periodically.

### Status

Last update: 01.01.2024

## DELIVERY DESCRIPTION

### Format (version)

- Geotiff

### Projections

UTM ZONE 33 (WGS84)

### Access restrictions

Information made available under [CC BY 4.0](#)

When using information from the Institute of Marine Research (IMR), the following reference must always be provided:

"Contains data under CC BY 4.0 made available by the Institute of Marine Research (IMR)."

### Service

The map is available as services ([WMS](#), [WCS](#)) and for download in a variety of formats from HI's geoserver <https://kart.hi.no/data>

For questions about use, feel free to contact us on [datahjelp@hi.no](mailto:datahjelp@hi.no)

## LINKS

- [Link to the numerical ocean model ROMS](#)
- [Link to technical report on the coastal model NorKyst800](#)
- [Link to application of NorKyst800](#)