

Water quality in the Belgian part of the North Sea: exploring ocean's health through online applications

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Large environmental changes, either natural or anthropogenic, generally occur over long periods of time. Physico-chemical properties of water are known to follow periodic seasonal changes, but ongoing climate changes affecting temperature, primary production and species distributions may drive ecosystem shifts over the long term. Therefore, it is crucial to monitor the environmental conditions in coastal waters consistently over a long period of time. For this purpose, the Flanders Marine Institute (VLIZ) initiated a scheme of high frequency sampling campaigns in the Belgian Part of the North Sea in 2002.

During the multi-disciplinary sampling campaigns, water column data is collected on physical, biochemical and biodiversity related aspects of the environment, including measurements of nutrients, pigments, suspended matter and turbidity. These water quality descriptors can provide supporting information for status assessments of eutrophication, pollution and changes in coastal waters; but also provide an important historic dataset with descriptors otherwise not accessible to the broad public.

Fixed versions of the datasets are published yearly (Flanders Marine Institute, 2019) whereas the most recent collections can be accessed online via the LifeWatch Data Explorer. Via this online application, it is possible to browse quality-controlled data, select on specific water quality descriptors, specify temporal and spatial windows and create exports of that data. Data and metadata are fully documented, and published under a CC-BY license, allowing use of the data under the condition of providing reference to the original source.

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