

Summary report on tracking the dispersion and advection of Harmful Algal Blooms (HAB) using satellite data

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Summary

Phycotoxins produced by Harmful Algal Blooms can potentially cause mass mortality of fish and shellfish. Understanding and anticipating the spatial and temporal dynamics of Harmful Algal Blooms is therefore of crucial importance for decision makers and those working in the fishing and shellfish industries. IFREMER Boulogne have developed tools that estimate the transport, dispersion and trajectories of phytoplankton blooms. In situ data have been used traditionally to monitor harmful algae blooms. These data are essential to monitor toxin production by algae that can affect shellfisheries. With the advent of satellite ocean colour technology, we can now monitor the oceans at spatial and temporal resolution that was not previously possible. The Copernicus Sentinel-3 satellite mission provides information on phytoplankton blooms at a resolution of 300 meters and will be operational for the next 20 years. Using these data with other environmental and meteorological variables, such as wind, temperature, nutrients, and tides, it may be possible to better forecast the blooms dynamics of harmful algae in the English Channel.