

The use of the IOC-ICES-PICES Harmful Algal Event Database (HAE-DAT) to detect spatial and temporal trends in harmful algal bloom events in UK waters

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The Intergovernmental Oceanographic Commission (IOC) -International Council for the Exploration of the Sea (ICES)-North Pacific Marine Science Organisation (PICES) Harmful Algal Event database (HAE-DAT) (<http://haedat.iode.org/index.php>) contains records of harmful algal events from across the globe over the last 30 years. HAE-DAT data from the United Kingdom contains records of shellfish harvesting closures enforced when paralytic shellfish poisoning (PSP), diarrhetic shellfish poisoning (DSP) and amnesic shellfish poisoning (ASP) toxins exceed the limits defined by the EU Shellfish Hygiene Directive (91/492/EEC and subsequent amendments). Data on fish kills and nuisance foams have also been submitted. Analysis of HAE-DAT data accurately describes the regional distribution of harmful algal events around the UK coast and provides useful baseline information for larger scale assessments e.g. as required by the Marine Strategy Framework Directive. Changes in the extent, duration and frequency of events may reflect environmentally driven changes in HAB dynamics (such as climate change) as well as modifications to monitoring programmes. Examples of both can be seen in the UK HAE-DAT data: a period of less frequent PSP events in Scotland despite relatively constant monitoring effort; a reduction in the extent and duration of UK ASP events due to a change in the EU legislation introduced in 2005. Knowledge of changes to routine monitoring programmes is required to interpret spatial and temporal trends in HAE-DAT data correctly.

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