



## **A Tsunami Warning System for the Northeast Atlantic**

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The risk to the UK from tsunamis is low, but not negligible, with possible source areas including offshore Portugal, the Mid-Atlantic ridge, and the Caribbean. In 2006, the British Department for Food and Rural affairs (DEFRA) commissioned the British Geological Survey (BGS) to establish a system that can detect and discriminate earthquakes which could pose a tsunami risk to the UK. Until now, this is a feasibility study without being part of a 24/7 tsunami watch centre. Rather than start from scratch in developing suitable earthquake detection software, the BGS chose to implement the EarlyBird software developed at the US NOAA West Coast and Alaska Tsunami Warning Center. A system comprising this software and a virtual network of more than 100 stations has now been operating reliably for over a year. The system is capable of automatically determining hypocentre location, various magnitudes and the moment tensor. All results can be inspected and modified in real time using interactive tools. The detection level is lower than required, considering that tsunami generation requires earthquakes of magnitude over 6.5, and response times for alert messages are good. If a tsunami warning centre is set up within the UK we are confident that the system discussed here would fulfil the seismic requirements.