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WaveNet: DATA THAT IMPROVES COASTAL FLOOD FORECASTING

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Centre for Environment Fisheries & Aquaculture Science

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WaveNet, Cefas' strategic wave monitoring network for the United Kingdom, provides a single source of real-time wave data from a network of wave buoys located in areas at risk from flooding. In operation since 2002, WaveNet collects and processes data from the Cefas-operated Datawell Directional Waverider buoys, tethered at strategic locations around the UK coastline. The WaveNet system also gathers wave data from a variety of other platforms and programmes funded by industry and the public sector. Cefas sends the wave data to the Met Office (to help improve the wave and tidal surge model) and the National Flood Forecasting Service for access by the UK Coastal Flood Forecasting Service (UKCFF).

Regional flood forecasters, local authorities and other stakeholders use the near-real time data from WaveNet buovs and the model predictions to provide better advice, guidance and warnings to emergency responders and communities about imminent coastal flood risk. Members of the public can access the data, which are visualised and provided free of charge on the WaveNet website; the number of visits peaks before storms and tidal surges. On a longer timescale, the data can provide coastal engineers and scientists with a better understanding of the wave climate when designing coastal flood defences and as evidence for climate change studies. WaveNet data are therefore used every day to keep people and property safe from short-term and long-term risks.

