Improving the safety of RNLI operations through better use of probabilistic weather information

The RNLI is the charity that saves lives at sea. Every year, volunteer lifeboat crew are called out around 8,000 times.
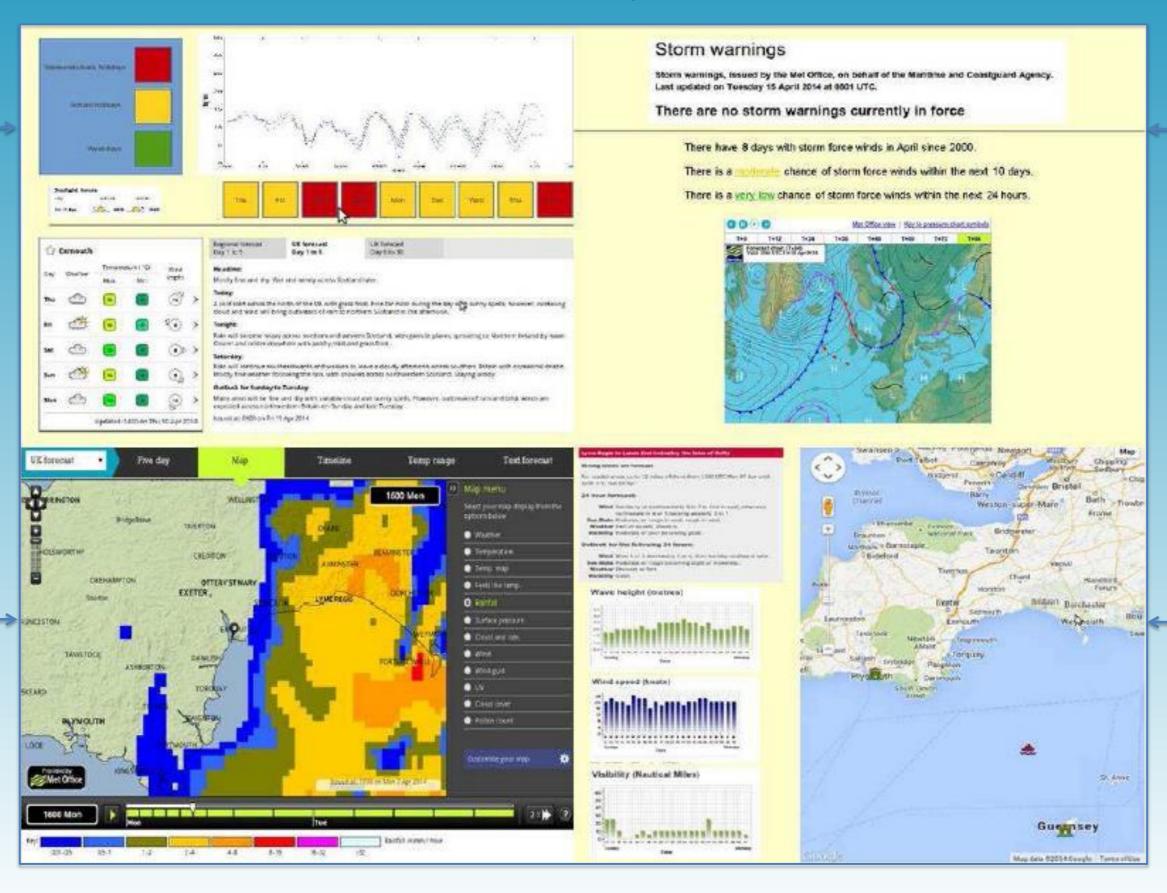

Our analysis found that the number of incidents per day is highly dependent on the temperature with the impact varying between weekends and weekdays inside and outside of school term time.

Large storms can make conditions at sea extremely dangerous. Early warning of such events can help the RNLI make informed operational decisions such as when and where to target safety campaigns and where to position crew.

The weather conditions around the UK and Ireland can change very quickly. Radars can give warning of adverse weather not visible from the area around the lifeboat station.
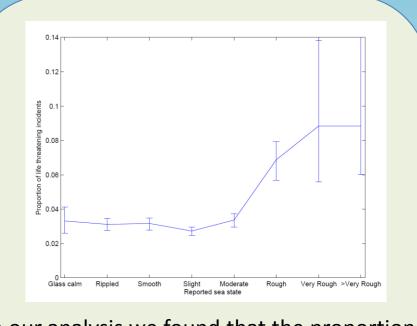

In our analysis we found that the proportion of incidents in which human life is endangered is twice as high when the reported sea state is rough or higher compared with when it is moderate or lower.

Difficult operational decisions about what a lifeboat is capable of in rough seas sometimes have to be made. The LSE proposed the risk visualisation tool above to help inform these operational decisions by combining academic work around weather risk analysis with RNLI knowledge and data about incident rates.

Tell me more

Link: scan the QR code below

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Lifeboats

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