

Extreme Temperatures Consultation

Introduction

Outside of the Public Weather Service (PWS) the Met Office provides bespoke services to the health sector covering high and low temperatures in England only. Interest was expressed by senior stakeholders in Wales and Northern Ireland regards coverage of the service and suggested that the PWS should consider providing a UK wide service. In January 2014 the PWSCG agreed that a period of discovery and consultation be undertaken.

Details

The current service is available to the public and Responder organisations whilst the service messaging is aimed at the health sector, making it less appropriate for use over multiple sectors.

Recognising that a number of other sectors and members of the UK public are impacted to different degrees by high and a low temperature, consultation was conducted to identify whether a user requirement exists for a more generic PWS service.

Consultation was undertaken by the Public Weather Service Customer Group (PWSCG) Secretariat, in conjunction with the Met Office, from May to July 2014.

The objectives of the consultation were to:

- Identify whether a multi-sector requirement exists for a high and/or low temperature service.
- Identify key requirements for the service, including forecast lead time, thresholds, impacts and scale.
- Identify whether a requirement exists from sectors of the UK public; evaluate the 'strength' and breadth/scale of this requirement.

Methodology

Information compiled in this report was obtained through:

Consultation meetings in person and via telephone calls with members of the responder community

Desktop research to establish current practices around communication of extreme temperatures to the general public, understand the public's use of this information and consider whether the current services meet the public's needs

Key Findings

- Current information received by responders varied from taking the Met Office Open Road service, receiving the Heat Health and Cold Weather Alerts as guidance (England only) and a high reliance on the Met Office Civil Contingency Advisors.
- Impacts of extreme temperatures also varied between responders.
- During the cold winter of 2010 it was noted that there were significant impacts from temperature alone (over and above any impacts from snow and ice). -18.9 C was recorded in Northern Ireland resulting in infrastructure cracks within public and private water utilities.
- The impact of heat on power supplies can be significant, especially in London where the widespread use of air conditioning can impose a large demand on supply and infrastructure. Infrastructure running at high load can cause over heating of transformers and distribution lines; overhead lines can sag (potentially into trees and other environmental obstacles). The impact of cold is less than heat; ice accretion on lines is a significant hazard and has an impact on network load. Less maintenance is undertaken on the network during very cold weather.

- Impacts on agriculture generally depend on timing, sector, temperature and associated weather. Heat affects livestock but the impacts are different depending on whether they are in a field or housed wheat crops are very sensitive to the extremes on heat and can easily fail.
- On the London Underground winter weather causes more stress than summer as 55% of the rails are above ground which means more de-icing, running trains all night to stop tracks freezing, cancelling overnight engineering and the early call back of staff.
- There was a good understanding that the impacts of severe weather vary across different sectors and therefore any new temperature service should only notify people of the very extreme temperatures. It was felt any extreme temperature service should therefore be the trigger for multi-agency responses.
- Public messaging was also discussed and it was clear that responders would like extreme temperature messages to go to the public so they can make their own decisions.
- When the trigger for extreme heat was discussed 30 degrees C was felt to be the heat trigger however this temperature for one day would not be too much of an issue but over a number of days it would cause problems. Therefore duration is key to the trigger. Lead times and durations were seen as very important. Significant lead time (5 days) is required by many to coordinate the management of resources and inform decisions.
- A trigger temperature for extreme cold was not easily identifiable.
- The probabilistic element of the products is seen to be highly valued. The ideal product would explicitly state the expected temperature range, e.g. 95% confident that the temperature will fall between +28C and +35C, most likely to be +31C and a duration for planning purposes, in some cases this was requested for a rolling 30 day period.
- Heat Health Plan and Cold Weather Alerts are focussed on the impacts of high temperatures on human health although impacts on other sectors are specified at a very high level within the Plan. There is little evidence of a structured mechanism for updating the Plan to cover requirements from other sectors.
- During the desk research phase it was found that there is a wealth of secondary information available about the impact of weather on health, various appropriate measures for extreme temperatures, the evaluation of extreme temperature plans from the perspective of the organisations that use the information and the different types of services already available around extreme temperature forecasts and alert services. There is less about the public understanding of the impact of extreme temperatures and related mitigating action and how useful the public find existing extreme temperature forecasts and alerts, especially in the UK.
- The main reason for lack of action is the lack of knowledge of what to do. At present, in the UK, key extreme temperature public health alert messages are only communicated via the key broadcast media to the mass public when a major incident is agreed. Up until this point communication is either available for those who know it exists and want to search for it or distributed to those targeted through the relevant public/voluntary organisations, as part of a “start of season” awareness campaign by the government to the general public or as a service offered by weather information providers (other than the MO) that allows the public to set their own thresholds for alerts.

The Way Forward

Consultation findings were reported to the PWSCG in July and October 2014. After further discussion it was felt that there could be other significant weather related impacts, which affect multiple sectors, that are not currently covered by the National Severe Weather

Warning Service and that it would be prudent to look at these as well as extreme temperatures with a view to creating an expanded or generic warning capability.

During the Spring/Summer of 2015 consultation regarding generic weather warnings will take place by way of Responder Workshops across the UK and using Public Focus Groups. The impact of extreme temperatures as well as other possible impacts will be part of this consultation.