

Consultation with Industry to Improve Australia's Climate Prediction Services

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Engaging with climate sensitive industries and understanding user needs is central to the development of climate services at the Australian Bureau of Meteorology (the Bureau). The Bureau has recently upgraded its climate prediction service with further substantial improvements underway. Comprehensive consultation has been undertaken at each phase of service development to not only determine user needs, but also measure levels of comprehension and satisfaction. Key findings were that comprehension of probabilistic climate outlooks is low and that comprehension is directly related to user satisfaction i.e. those that answered comprehension questions correctly were four more times likely to be satisfied with the Bureau's service than those that answered one or more of these questions incorrectly.

Economic analysis indicates that the potential value of improved climate prediction services for Australian agriculture is of the order of AUD 958 million to AUD 1,930 million per year (Centre of International Economics, 2014). Significant value is also estimated for other climate sensitive industries including construction, energy, mining, retail, water, emergency services, tourism, finance, and insurance. Determining user needs and tailoring services to sectors, increasing uptake of services and improving comprehension of probabilistic outlooks are key steps in unlocking the potential value of climate services.

The results from the comprehensive engagement with industry undertaken in both 2010-11 and 2015-16 were presented. This included the method of engagement, recommendations from consultation and the service improvements that resulted. Improvements made to the service as a result of the 2010-11 consultation are shown in Fig.1. The 2015-16 consultation was undertaken to inform significant improvements that will be implemented in the coming years (Fig 2). It is unlikely the Bureau would have secured funding for recent and planned service improvements without the formal quantitative and qualitative feedback collected through these



Fig 1. A comprehensive review of the Bureau's climate outlook service in 2011 showed that about a quarter of users were potentially misinterpreting Bureau climate outlooks, and that users wanted more tailored information for their location. In response, in 2014 the Bureau released a re-built climate outlook service web portal which made information more understandable and accessible. The new website has more functions, such as the ability to tailor outlooks to a specific location and is mobile friendly. Bureau climate outlooks information is now also provided through social media. To improve comprehension, educational videos and an online interactive training course (in partnership with UCAR COMET) are now provided.

consultations.

Links and references:

Visit the Bureau's climate outlook service on the web: www.bom.gov.au/climate/ahead

Read the 2014 Centre of International Economics reports, Analysis of the benefits of improved seasonal climate forecasting for agriculture and Analysis of the benefits of improved seasonal climate forecasting: For sectors outside agriculture, on the web:

<http://managingclimate.gov.au/research/current-projects/climate-forecasting-research-2/improved-seasonal-climate-forecasts-the-benefits-for-agriculture/>

Key findings from the 2010-11 stakeholder engagement were published in 2012. (Boulton, E., A. Watkins and D. Perry, 2012: A user-centred design approach to the seasonal climate outlook. *Climate Exchange*, World Meteorological Organization, F. Lúcio and T. Avellán, Eds., Tudor Rose, 232-235.)

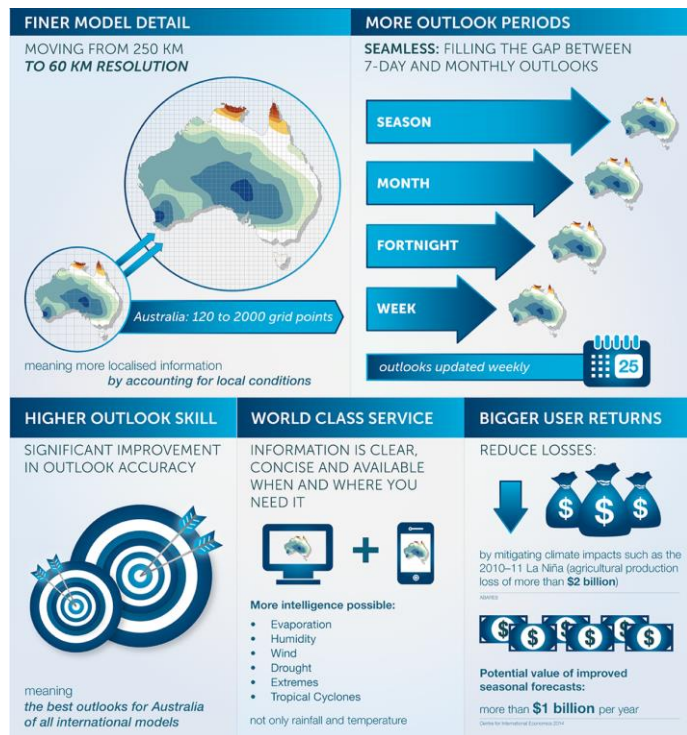


Fig. 2 Planned service improvements.