Event attribution for all audiences – a web portal concept

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As event attribution moves towards an operational service, the attribution community needs to give thought to what this service might look like, how it will be executed and how it will be communicated to a range of customers. Here we propose one concept for delivering such a service.

Our stakeholders need a quick and easily understood answer to whether the probability of an event has been changed by human influence. To enable us to do this, the Met Office event attribution system uses large ensembles of a state-of-the-art, high-resolution global climate model (HadGEM3-A-N216). Two ensembles have been produced, one with all historical climate forcings and one with only natural forcings. These can be used to examine extreme events, but we need tools with which customers can get the access they need directly.

The tool we are developing comprises a web portal to select event region, season and variable. This will start with a simple design initially, but will include many more options with time, whilst maintaining simplicity of use. It will be developed in consultation with stakeholders, giving them access to the scales and events of importance to them. We may then use this as the front end of event analysis code running on a scalable cloud computing platform which calculates results on-the-fly.

The web portal will present results to the user as a sequence of pages, beginning with concise and simple diagrams, case-specific to illustrate event changes with climate. As further information is requested, the portal will then display results in a progressively more detailed and specialist manner, ranging from simple bar charts representing changes in event probabilities, to in-depth validation techniques. In this way, it will present the user with data relevant to their understanding without overloading them with information.

The intention is for this to be an extensible utility, with further options becoming available as services are developed as part of the EUPHEME project and other initiatives developing event attribution.