

A pilot international weather event attribution experiment

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The mid-2009 through 2010 period was remarkable for a number of unusually meteorological events around the world, from cold European winters and large snowstorms in the northeastern United States at both ends of 2010, to an unprecedented heatwave in western Russia, to flooding in Queensland and the Pakistani desert. After each of these events, a prominent question was whether anthropogenic emissions had increased their chances and thus whether our emissions are to blame. This poster presents a pilot project to address these attribution questions in a robust, multi-institutional framework. It adopts a time-slice approach, in which atmospheric models are driven observed 2009-2010 sea surface temperatures and sea ice concentrations, under current climate forcing conditions and under forcing conditions that might have been had anthropogenic activities never interfered with the climate. The data from this project provides the first true opportunity to evaluate the interplay of the importance of atmospheric model selection, atmospheric model reliability, attributable ocean warming estimation, and event type, location, and timing to the estimation of attributable risk. This poster will discuss the project design, present some results, and discuss relevant lessons for future planned multi-institutional attributable risk projects.