



Drought in the Horn of Africa: attribution of a damaging and repeating extreme event

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We have applied detection and attribution techniques to the severe drought that hit the Horn of Africa in 2014. The short rains failed in late 2013 in Kenya, South Sudan, Somalia and southern Ethiopia, leading to a very dry growing season January to March 2014, and subsequently to the current drought in many agricultural areas of the sub-region. We have made use of the weather@home project, which uses publicly-volunteered distributed computing to provide a large ensemble of simulations sufficient to sample regional climate uncertainty. Based on this, we have estimated the occurrence rates of the kinds of the rare and extreme events implicated in this large-scale drought. From land surface model runs based on these ensemble simulations, we have estimated the impacts of climate anomalies during this period and therefore we can reliably identify some factors of the ongoing drought as attributable to human-induced climate change. The UNFCCC's Adaptation Fund is attempting to support projects that bring about an adaptation to "the adverse effects of climate change", but in order to formulate such projects we need a much clearer way to assess how much climate change is human-induced and how much is a consequence of climate anomalies and large-scale teleconnections, which can only be provided by robust attribution techniques.