

Devastating East African drought made more likely by climate change

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In 2011 a powerful drought gripped East Africa. The failure of both the 2010 fall rains and the 2011 spring rains caused a drought that, stacked on an already unstable political climate, caused a famine that led to hundreds of thousands of deaths. Whenever an extreme weather event strikes a population—a drought, a hurricane, or a powerful flood—questions arise as to whether ongoing global climate change is complicit.

Most scientists, when confronted with such questions, suggest that no one act of weather can be attributed to the long-term statistical shifts that make up a change in climate. The nascent field of event attribution, however, is seeking to provide a more satisfying answer to this question. Using climate modeling techniques, researchers estimate how the probability or magnitude of a specific extreme event—in this case, the failure of the East African rains—was affected by climate change.

Comparing modeled East African precipitation patterns in a world affected by anthropogenic forcings against a climate change-free scenario, Lott et al. find that the probability of failure of the 2011 East African spring rains was increased by climate change, though the various models used disagreed on the exact size of the increase. The authors suggest that the reduction of the spring rains hinged on the rise in [sea surface temperature](#) caused by anthropogenic climate change.

They find that the failure of the 2010 fall rains, however, was due not to anthropogenic climate change but to the ongoing La Niña conditions.

More information: Can the 2011 East African drought be attributed to human-induced climate change? *Geophysical Research Letters*, [doi:10.1002/grl.50235](https://doi.org/10.1002/grl.50235), 2013 [onlinelibrary.wiley.com/doi/10 ... 2/grl.50235/abstract](https://onlinelibrary.wiley.com/doi/10.1002/grl.50235/abstract)

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