UPR scientist studies drought related to volcanic activity

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El doctor Amos Winter, de la UPR de Mayagüez, encabezó la investigación de un grupo internacional de científicos. (Suministrada / Oficina de Prensa del RUM)

Approximately half of the world's population lives in the tropics, and future changes in the hydrological cycle will impact not just the freshwater supplies but also energy production in areas dependent upon hydroelectric power. It is vital that we understand the mechanisms/processes that affect tropical precipitation and the eventual surface hydrological response to better assess projected future regional precipitation trends and variability. Paleo-climate proxies are well suited for this purpose as they provide long time series that pre-date and complement the present, often short instrumental observations. Here we present paleo-precipitation data from a speleothem located in Mesoamerica that reveal large multi-decadal declines in regional precipitation, whose onset coincides with clusters of large volcanic eruptions during the nineteenth and twentieth centuries. This reconstruction provides new independent evidence of long-lasting volcanic effects on climate and elucidates key aspects of the causal chain of physical processes determining the tropical climate response to global radiative forcing.

The original article is available in English.

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