

## Macro Roundup Article

**Headline:** Long-term Surface Impact of Hunga Tonga-Hunga Ha'apai-like Stratospheric Water Vapor Injection

**Article Link:** <https://essopenarchive.org/users/304243/articles/657090-long-term-surface-impact-of-hunga-tonga-hunga-ha-apai-like-stratospheric-water-vapor-injection>

Author(s)	Martin Jucker, Chris Lucas and Deepashree Dutta
Publication	Preprint
Publication Date	August 08, 2023

**Tweet:** New research suggests water vapor from a recent volcanic eruption is a major factor in the recent uptick in global temperature. The research suggests the impact will persist over a decade.

**Summary:** Volcanic eruptions typically cool the Earth's surface by releasing aerosols which reflect sunlight. However, a recent eruption released a significant amount of water vapor-a strong greenhouse gas-into the stratosphere with unknown consequences. This study examines the aftermath of the eruption and reveals that surface temperatures across large regions of the world increased by over 1.5°C for several years, although some areas experience cooling close to 1°C. Additionally, the research suggests a potential connection between the eruption and sea surface temperatures in the tropical Pacific, which warrants further investigation.

**Related Articles:** What This Year's 'Astonishing' Ocean Heat Means for the Planet and Warming Could Push the Atlantic Past a 'Tipping Point' This Century and The Rapid Loss Of Antarctic Sea Ice Brings Grim Scenarios Into View

**Primary Topic:** Science

**Topics:** Academic paper, Global Warming, Science

**Permalink:** <https://www.edwardconard.com/macro-roundup/new-research-suggests-water-vapor-from-a-recent-volcanic-eruption-is-a-major-factor-in-the-recent-uptick-in-global-temperature-the-research-suggests-the-impact-will-persist-over-a-decade?view=detail>

**Featured Image Link:** <https://www.edwardconard.com/wp-content/uploads/2023/08/Volcanic-Eruption-And-Water-Temp.png>