

# Hailstorms in South America

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Severe thunderstorms over South America are among the most intense worldwide. However, due to low population density and limited research activities their distribution and characteristics are less understood than in other regions, although this information is crucial, for instance for insurance companies. We use a well-established hail hazard modeling approach, which has already been used over Europe, Australia, and South Africa. Thunderstorm overshooting top data from NASA satellites are combined with ERA5 reanalysis to produce a hail climatology and hail event dataset. In collaboration with insurers, the dataset serves as a basis to assess the characteristics and threat of hail. Furthermore, the unique 28-year satellite dataset facilitates a trend analysis to quantify the impact of climate change on severe hailstorms in South America.

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