



## **Past and future building damage from drought-induced soil subsidence**

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Certain soils shrink and swell in response to wet and dry conditions, inducing vertical soil movements, known as soil subsidence. These soil movements can cause important damage to buildings and other infrastructure. In France, damages from soil subsidence amount to several hundred million Euros per year, thus having attained the same level as damage from floods. Until now however, soil subsidence has not attracted much attention in the climate science community, in contrast to floods or winter storms.

In this presentation, we report on a pioneering project investigating the causes, processes and implications of soil subsidence. We show that meteorology is a key factor for understanding the interannual variability of the observed damages. We discuss further factors, such as geology, soil hydrology and construction technique. The analysis of the most recent events suggests that changes in drought patterns due to climate change have led to important damage in regions which have not been previously affected by soil subsidence. We will discuss possible implications for the future.