

## **Impact of Heat Waves on Mortality: Extension of Longevity Models to Account for Global Warming**

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### **Abstract:**

Global warming significantly impacts human health, with intense heat waves causing spikes in mortality, particularly among the elderly. Recently, longevity models have started to incorporate a temperature-related component to account for climate change. We propose an extension of Seklecka et al. (2017), which specifically models the impact of heat waves. Our approach complements existing longevity models, demonstrates better robustness indicators, and can forecast future mortality based on various climate scenarios. In this regard, we present the impacts on french mortality of three Representative Concentration Pathway (RCP) scenarios from the last IPCC report.

### **Keywords:**

Longevity, Global warming, RCP scenarios, Forecasting, Heat wave.