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Better weather forecasts = better human health? Yes, with TRIGGER(s)

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As the impacts of climate change on human health become increasingly evident, so does the need for a systemic and interdisciplinary understanding on the climate-health connection. Achieving such an understanding is key to the development of effective and rational adaptation plans, including those involving the creation of weather forecasts-driven systems that can increase the preparedness and response to health hazards.

To address this shortcoming, the Horizon Europe project TRIGGER (SoluTions foR mItiGatinG climate-induced hEalth thReats) aims to generate and disseminate information about upcoming conditions detrimental to human health, such as heatwaves and cold spells, via an innovative prototype that integrates state-of-the-art climate and weather indicators with personal exposure monitoring data.

We here present the TRIGGER prototype with a focus on the hydrometeorological prediction system that is tasked to forecasts health-impacting climate variables and indicators on temporal scales ranging from the short-range (hours) to sub-seasonal lead-time. Using a co-design approach involving medical doctors and epidemiologists, we describe how the system utilizes the ECMWF forecasts, provides probabilistic predictions for the near future, and enables the assessment of the associated uncertainty.