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Epidemics, climate change and natural hazards: Impacts and risk perceptions under COVID-19

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Epidemics, climate change and natural hazards are increasingly affecting humankind and are plausibly re-shaping the way in which people perceive multiple risks. Here we integrate epidemiological, policy, climate and natural hazard data with the results of two waves of nationwide surveys in Italy and Sweden. These were conducted in two different phases of the COVID-19 pandemic corresponding to low (August 2020) and high (November 2020) levels of infection rates. We investigate the interplay between negative impacts and public perceptions of multiple hazards including epidemics, floods, droughts, wildfires, earthquakes, and climate change. Similarities and differences between Italy and Sweden allow us to investigate the role of policy, media coverage, and direct experience in explaining public perceptions of multiple hazards. The way in which people think about epidemics, for example, is expected to have been substantially influenced by the COVID-19 pandemic that has severely affected both countries, but to which the Italian and Swedish authorities responded differently. Indeed, we found that epidemics are perceived as less likely and more impactful in Italy compared to Sweden. In addition, when multiple hazards are considered, people are more worried about risks related to recently occurred events. This is in line with the cognitive process known as availability heuristic: individuals assess the risk associated with a given hazard based on how easily it comes to their mind. Furthermore, for the majority of hazards, we found that in both countries women and younger people are generally more concerned. These new insights about the interplay between multiple hazards and public perceptions can inform the development of sustainable policies to reduce disaster risk while promoting public health.