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## Impact of natural hazards on the evolving COVID-19 pandemic: cases from Greece

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The first confirmed COVID-19 case was reported in December 2019. Over the first months of 2020, the novel SARS-CoV-2 virus was spread worldwide resulting in the declaration on March 11, 2020 of a global COVID-19 pandemic by the World Health Organization. The evolving pandemic has resulted in over 1900000 fatalities worldwide (as of January 8, 2021), while all sectors of the everyday life has been affected in numerous and varied ways. Natural hazards did not stop for the novel coronavirus. When the natural hazards cross the path of an evolving pandemic, compound emergencies emerge and are characterized by various effects and new unprecedented challenges.

Greece was no exception. Geological, hydrological and meteorological hazards took place in several parts of the country and they affected the local population, the natural and the built environment including buildings, infrastructures and lifelines. Among the most destructive effects in terms of human and economic losses was the March 21, 2020, Mw=5.7, Epirus (northwestern Greece) earthquake, the August 9, 2020, Evia (central Greece) flood, the September 17, 2020, Ianos medicane and the October 30, 2020, Mw=7.0, Samos (Eastern Aegean Sea) earthquake.

In order to identify the potential impact of the aforementioned disasters on the evolution of the COVID-19 pandemic in the disaster-affected areas, the officially reported laboratory-confirmed daily COVID-19 cases for the pre- and post- disaster periods from the disaster-affected areas were used. The impact of disasters in the evolution of the pandemic in the studied disaster-affected areas comprises increasing and decreasing trends and stability of the COVID-19 cases during the post-disaster period. More specifically, the geological and the hydrological hazards and the induced disasters negligibly affected the evolution of pandemic in the affected areas, while the hydrometeorological hazards resulted in increasing trends of the post-disaster reported COVID-19 cases in various affected areas.

The detected trends are strongly associated with the pre-existing viral load and infection rate in the disaster-affected areas, to the emergency response actions adapted to adopt provisional measures for the mitigation and elimination of COVID-19 consequences, to demographic features of the affected areas and to the intensity of the induced disasters and their effects on the local population (fatalities and injuries), the natural environment (primary and secondary

environmental effects) and the built environment (structural damage to buildings, infrastructures and lifelines).