



M_L 5.5 and M_L 6.2 earthquakes in central Croatia during COVID-19 pandemics

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In 2020, central part of Croatia was struck by two major earthquakes: on 22 March in Zagreb and on 29 December near Petrinja. Both earthquakes happened while country was in COVID-19 „lockdown“.

Magnitude M_L 5.5 earthquake occurred on Sunday morning at 5:24 UTC (6:24 CET) with the epicentre at Medvednica Mt., in the Zagreb's outskirts, just 7 km to the north of the centre of the Croatian capital. The intensity in the epicentre and in the historic centre was estimated as VII EMS, and a young girl lost her life. The earthquake struck just a day after public transport was suspended for 30 days, three days after public gatherings of more than five people were forbidden, the restaurants, shops (except for groceries, hygienic and other necessary items) and cultural institutions were closed, and six days after closure of schools and universities. A day after the main event, people were forbidden to leave their city/town/municipality of residence without written permission of local government. At that time, Croatian “lockdown” was described as one of the strictest ones in EU.

On Tuesday 29 December 2020 at 11:19 UTC (12:19 CET) a magnitude M_L 6.2 (M_W 6.4) earthquake occurred in rural area of central Croatia, near town of Petrinja. It was preceded by magnitude M_L 5.0 and M_L 4.7 events a day before. These events caused significant damage to buildings in Petrinja and Glina and the surrounding villages. The highest intensity was estimated as VIII–IX EMS and seven people lost their lives. This sequence happened also during the “lockdown” due to COVID-19 pandemics with strict measures imposed on 21 December 2020, some of which were cancelled after the mainshock.

We will discuss events and processes that followed these strong earthquakes and how having to deal with two damaging events only nine months apart and in the unusual pandemic-related circumstances affected our work as seismologists but also our “everyday” lives.