

Global earthquakes in the 2021 first half according to the GS RAS

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Abstract Data on the 2021 first half Earth seismicity at the level of strong earthquakes with magnitudes $m_b \geq 6.0$ according to the Alert Service of the Geophysical Survey RAS are given. The review also includes information on 81 earthquakes in Russia and adjacent territories, felt in the settlements of the Russian Federation. For 14 strong earthquakes, within one or two days after their occurrence, Informational messages were published, and information about the focal mechanisms was giving. The strongest earthquake of the Earth with $MS=7.8$ ($Mw=8.1$) occurred on March 4 at the Kermadec Islands, New Zealand. The largest human casualties and material damage during the study period were caused by catastrophic earthquakes with $MS=5.1$ ($Mw=5.8$) and $MS=5.9$ ($Mw=6.3$), which occurred on January 14 at the Sulawesi Island, Indonesia. As a result of the earthquakes, 81 people died, 826 were injured. The strongest earthquake in Russia was the March 16 earthquake with $MS=6.7$ ($Mw=6.6$) off the eastern coast of Kamchatka. The maximum shaking intensity in Russia ($I=6$) was manifested by the strong Khuvsgul earthquake with $MS=7.2$ ($Mw=6.8$), which took place on January 11 in the Northern Mongolia, near the border with Russia. The position of the main shock and its aftershocks indicate the intensification of the seismic process in the northwestern part of the Khuvsgul rift zone. According to the focal mechanisms of the main shock and two strong aftershocks, the stress of the northwest/southeast extension prevails in this zone, and the predominant slip type along the faults of the northeast strike is a normal fault. The global seismic energy released in the 2021 first half remains, as in the previous two years, at a reduced level, relative to the average for the last 11.5 years, which indicates a continuing seismic calm.

Keywords Earthquake Early Alert Service, seismic stations, strong earthquakes, magnitude, seismic energy, focal mechanism, macroseismic effect.

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