Global earthquakes in the 2022 second half according to the GS RAS

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Received February 1, 2023

Abstract Information is provided on the seismicity of the Earth at the level of $m_b \geq 6.0$ in the 2022 second half, as well as on 66 earthquakes felt on the territory of the Russian Federation according to the to the Alert Service of the Geophysical Survey RAS. For the 15 most severe earthquakes, information messages were published within one or two days after their implementation, the parameters of the mechanisms of foci were calculated and given. During the period under review, the strongest earthquake on the globe with MS=7.8 (Mw=7.7) occurred on September 19 in the state of Michoacan, Mexico. The greatest human casualties and material damage were caused by a catastrophic earthquake with MS=5.3 (Mw=5.6), which occurred on November 21 on the island of Java, Indonesia. Because of the earthquake, 318 people were killing and more than 7,700 people were injured. On the territory of Russia, the strongest earthquake was on September 20 with MS=6.0 (Mw=6.1) in the area of the Commander Islands. The earthquake of December 8 with mb=5.6 (Mw=5.5), which occurred on the territory of the Republic of Dagestan, was felt with the greatest intensity of concussions (6 points) in the settlements of Russia. The seismic energy released on the globe for the 2022 second half ($9.1 \cdot 10^{16}$ J) increased after its minimum over the past 13 years (2010–2022), observed in the 2022 first half ($2.76 \cdot 10^{16}$ J), however, remained below the average value for 2010–2022 ($2.31 \cdot 10^{17}$ J).

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

For citation Vinogradov, Yu.A., Ryzhikova, M.I., Petrova, N.V., Poygina, S.G. & Kolomiets, M.V. (2023). [Global earthquakes in the 2022 second half according to the GS RAS]. *Rossiiskii seismologicheskii zhurnal* [Russian Journal of Seismology], *5*(1), 7-25. (In Russ.). DOI: https://doi.org/10.35540/2686-7907.2023.1.01. EDN: WSZPLJ.

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