

of Exogenous Phenomena by Seismic Stations in Kyrgyzstan

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The National Data Center of Kyrgyzstan daily monitors seismic events of various nature, most of which are tectonic earthquakes and quarry blasts. Sometimes seismic stations in Kyrgyzstan register unusual phenomena associated with exogenous geological processes, such as landslides, snow avalanches, rockfalls and mudflows. Landslides and snow avalanches can be caused by both tectonic processes and geological, geomorphological and hydrogeological conditions, climate change, as well as the impact of a complex of anthropogenic factors. According to the records of Kyrgyzstan's seismic networks the features of the waveform of a powerful landslide on November 30, 2019 ~23-43 GMT in the area of the Kumtor gold deposit were studied, the volume of which was 12.825 million cubic meters. The waveforms of another landslide on September 14, 2020 in the area of the Kara-Keche coal deposit with a volume of ~1 million cubic meters were studied. As well as seismic records of a glacier retreat with a volume of ~2 million cubic meters in the area of the Juuku gorge on July 8, 2022 ~08-44. It is shown that landslides in the areas of the Kara-Keche and Kumtor deposits are caused by anthropogenic activity, and the glacier collapse is caused by climate change.

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Promotional text

The results of these investigations can be used for discrimination's purposes of event's nature.

Oral preference format

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