

A collapsing glacier in Kyrgyzstan sends worrying signal to Central Asia

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Tian Shan mountains, Kyrgyzstan. Credit: [Thomas Depenbusch \(Depi\)](#) /Wikimedia Commons, [CC BY 2.0](#)

On July 8, a glacier collapsed in the mountains of the Issyk-Kul region of Kyrgyzstan, triggering an avalanche. There was little knowledge of this

incident for two days, until it was publicized by foreign tourists who witnessed it. These events took place at the Dzhuku pass on the Terskey Ala-Too ridge on the side of Central Asia's biggest gold mine, Kumtor.

Harry Shimmin, a British tourist, explained to a local news outlet that the [ice mass](#) melted off at the moment when a group of tourists was crossing the Dzhuku pass. Thanks to a lucky chance, the tourists had not yet passed the section directly in its path, which minutes later was covered with an ice mass. "If we had walked 5 minutes further on our trek, we would all be dead," Shimmin wrote on Instagram. He continued, "We traversed [the section] afterwards, walking among massive ice boulders and rocks that had been thrown much further than we could have run, even if we acted immediately." Had it not been for their presence in the area at this time, visual testimony of this disaster would not have been available.

Kairat Moldoshev, a professor in the Department of Ecology and Tourism of Kyrgyz Pedagogical University in the national capital of Bishkek, stated that the glacier's disappearance is a consequence of climate change. Due to the high air temperature and a heatwave which hit Central Asia last year, a large portion of the glacier melted, and part of its ice collapsed into the valley.

Now, as Moldoshev suggests, it is necessary to begin systematic observation of the pass into which the glacier descends, since the mass that reaches the lower elevations will melt and may provoke mudflows.

Glaciers in Central Asia, as in other regions, are melting. The partial destruction of a glacial ice mass is a common occurrence in the mountains of Kyrgyzstan. However, such a large-scale collapse rarely occurs. And it is even more unusual that such an event would be filmed on video.

In June, the Government of Kyrgyzstan proposed to Parliament that it give opportunities to international investors to use all metal and [gold mines](#) to provide extra income to the weakened economy of the country. It was announced that large investors will be invited to participate in open tenders for the development of the Jetim-Too [iron ore](#) mine in Naryn, the Sandyk aluminum mine in Jumgal, the Bala-Chychkan copper-gold mine in Talas, and the Kuttuu-Sai-II rare metals mine in Kemin. But scientists in the state geo-environmental agency safety department have warned that mining operations will bring [negative impacts](#) if measures are not taken to protect glaciers, fragile slopes, and ecosystems.

Under the previous government authorities, the initiative to open and develop the Jetym-Too and Sandyk mines was opposed by [local populations](#) and led to significant protests. Local populations have longstanding concerns that mining operations would harm pastures and soil.

Isakbek Torgoev, the head of the Laboratory for Geoecological Monitoring Center within the Kyrgyz National Academy of Sciences, told Azattyk Media that environmental safety measures are not provided, and open pit mining of those deposits poses a threat to the ecosystem of the mountain ranges:

"I am very much against open mining of the Jetym-Too iron mine. If we dig and work it in an open way, it will cause great damage to the environment. This is because in the Jetym-Too ridges, like in Kumtor, there is a source of water for the Naryn River. If we start to dig a mine, very large quarries will be created to extract iron ore concentrate, and millions of tons of rocks will be mined. The crust of the mountain ranges will be damaged, and the permanent ice and glacier system will collapse."

Dzhuku Gorge, the site of the disaster, is one of the most beautiful

places in Issyk-Kul; a large number of tourist routes pass through the gorge. It is also close to the gold mine Kumtor. According to environmental activists and researchers, two big glaciers in the Kumtor mine are seriously threatened. Mining operations contribute to their shrinking, whether through direct removal of ice or through the deposition of waste and other dark materials on their surfaces. The accelerated decline of the glaciers may cause serious environmental problems not only to Kyrgyzstan, but to the entire Central Asia region, for which glaciers are a critical element in the provision of water resources.

The glaciers of the mountain ranges of Kyrgyzstan are not only an element of the landscape, but are also significant accumulators of moisture. The snow and ice concentrated in them are released as meltwater during the warm period of the year. This role of glaciers is increasingly important now, due to the drought and water shortages in the region, though the accelerated loss of glaciers—signaled by this disaster—call this role into question.

For major rivers in Central Asia, such as the Syr Darya, glaciers in Kyrgyzstan have become a critical source of water in the warmer months. In Kyrgyzstan, more than 8,000 glaciers and eternal snows stretching over 8,100 square kilometers make up about 8% of the country's territory. The fate of the glaciers is an urgent problem for Kyrgyzstan.

Kyrgyzstan is among the 195 countries that ratified the Paris Agreement in 2015. All ratifying states are obliged to take appropriate measures to prevent the rise in temperature on the planet by more than two degrees Celsius. The president of Kyrgyzstan, Sadyr Japarov, made a speech at COP 26, the major global climate summit, last November, emphasizing the importance of this issue. He was the only leader from Central Asia to attend the event, and made a statement on melting glaciers, urging world

leaders to take action and make commitments to save glaciers in Central Asia. As the recent disaster shows powerfully, the glaciers of this region—and the people and ecosystems that rely on them—are facing growing threats. The time for concerted action, in this region as elsewhere, is now.

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