

Letters

# Response of Glacier Flash Flood to Climate Warming in the Tarim River Basin

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摘要

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## Response of Glacier Flash Flood to Climate Warming in the Tarim River Basin

Shen Yongping<sup>1, 2</sup>; Wang Guoya<sup>1</sup>; Shao Chun<sup>1</sup>; et al.

1 Cold and Arid Regions Environmental and Engineering Research Institute, Chinese Academy of Sciences, Lanzhou 730000, China; 2 Institute of Desert Meteorology, China Meteorological Administration, Urumqi 810002, China;

**Abstract** In past 50 years, the air temperature fluctuation was raising trend in Tarim River Basin. The annual mean temperature has increased by 0.3°C in the whole Tarim River Basin, and by 0.6°C in the mountain areas. With global warming, the frequency of unstable and extreme climatic events increased, glaciers retreating accelerated and snow meltwater increased have resulted in the more frequency of snow-ice disasters such as glacier debrisflow and glacier flash flood etc. Since 1980s, in the process of intense climate warming, glaciers melting intensified, ice temperature rose and glaciers flows accelerated, and lead to more glacial lakes and extending water storage capacity and stronger glacial lake outburst floods occurrence. It is proposed that the monitoring and evaluating of the impact of climate change on water resources and floods should be enhanced.

**Key words** [climate warming](#) [glacier flash flood](#) [response](#) [Tarim River Basin](#)

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通讯作者 [shenyp@lzb.ac.cn](mailto:shenyp@lzb.ac.cn)

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