A Big Earth Data Platform for Three Poles

**Global inventory of glacier-related slope failures and moraine dammed lake outburst floods (1901-2020)**

1、Description

Continued global warming and degradation of the cryosphere are raising concerns about adaptation to environmental instability in mountain areas. In recent decades, glacier-related slope failures, such as ice avalanches and rock avalanches on glaciers, have been frequently documented. In this study, we create a global inventory of glacier-related landslides to examine their distribution, trends, fractures, and relationship to climate change. During the period 1901-2019, 737 glacier-related landslides were recorded, including 156 ice avalanches, 89 ice-rock avalanches, 26 glacier slides, and 466 supraglacial rock avalanches. The Pacific Northwest had the most recorded cases (N = 440, 60%), with supraglacial rockfalls being the most dominant. In addition, the currently published list of glacial lake outburst floods of regional or global nature is integrated and refined, and moraine lake outburst flood events are separated separately. 380 moraine lake outburst flood events were counted between 1901 and 2020, making it the most complete list available on a global scale.

2、Keywords

Theme：glacial lake,glacier hazard,Glacier(Ice Sheet)  
Discipline：Cryosphere  
Places：Tibetan Plateau  
Time：1901-2020

3、Data details

1.Scale：None

2.Projection：

3.Filesize：2.0MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：80.0 | - |
| west：-170.0 | - | east：170.0 |
| - | south：-80.0 | - |

5、Time frame:1901-08-31 15:54:00+00:00--2020-10-01 03:59:59+00:00

6、Reference method

References to data:

ZHANG Taigang, WANG Weicai. Global inventory of glacier-related slope failures and moraine dammed lake outburst floods (1901-2020). A Big Earth Data Platform for Three Poles, doi:10.11888/Cryos.tpdc.2728122022

References to articles:

7、Supporting project information

8、Data resource provider

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