A Big Earth Data Platform for Three Poles

**Distribution data of typical freeze-thaw disasters along Sichuan Tibet Railway (2020)**

1、Description

The data set includes the distribution data of mud flow terraces along the Sichuan Tibet railway and the distribution data of debris and loose particles along the Sichuan Tibet railway. The distribution data of mud flow terraces along the Sichuan Tibet railway is based on the data of Gaofen No.2 in recent years in China. The distribution map of freeze-thaw mud flow Terraces along the Sichuan Tibet railway is produced by deep learning classification method combined with manual visual interpretation and correction. The largest single mudflow terrace is 1030043 m2, which is located in Kangding City, about 12km away from Xinduqiao station of Sichuan Tibet railway. The smallest single mudflow terrace is 1102 m2, which is located in Naidong District, about 3.3km away from Jiacun station of Sichuan Tibet railway. The average area of mudflow terrace along the line is 45013 m2. Mudflow terraces along the line are mainly distributed in Kangding City, Chaya county and SANGRI county.  
Based on the remote sensing image data of gaofen-2 in the study area, the distribution data of clastic particles along the Sichuan Tibet railway are interpreted. The slope particles are widely developed in Litang Linzhi section of Sichuan Tibet railway. According to the flow characteristics and structural model, they are divided into active type and in-situ weathering type. At present, a total of 2308 slope granular diseases have been identified in the study area, covering an area of 1283.21km2, with an average area of 0.56km2. The minimum area in the figure above is 600m2, which is mainly distributed between 3700m and 5500m above sea level, with an average altitude of 4767.78m. About 95% of the slope particles in the study area have an area less than 2.0 × 104m2, with an average area of 55.5 square meters × 104m2, with the largest area of 9148 × 104m2； The slope granular materials are mainly distributed between the elevation of 4500-5400m, accounting for 87.9% of the total slope granular materials. The slope granular materials with the elevation of 5000-5400m account for 47.7%, with an average elevation of 4945m. The single slope granular material with the lowest elevation has an elevation of 3241m; The slope gradient of granular materials in the study area is mainly between 30-70 ° Among them, accounting for 89.5% of the total number of slope granular. The data set is used to formulate the operation specification of digital processing. In the process of processing, the operators are required to strictly abide by the operation specifications, and the special person is responsible for the quality review. The data integrity, logical consistency, position accuracy, attribute accuracy, edge connection accuracy and current situation are all in line with the requirements of relevant technical regulations and standards formulated by the State Bureau of Surveying and mapping. It provides a basis for the study of the development law of freeze-thaw mudflow and paleoclimate and the geographical distribution characteristics of granular materials on the slope of Sichuan Tibet engineering corridor.

2、Keywords

Theme：Natural Disaster,Disaster  
Discipline：Human-nature Relationship  
Places：Tibet Autonomous Region, Sichuan Province  
Time：2020

3、Data details

1.Scale：250000

2.Projection：GCS\_China\_Geodetic\_Coordinate\_System\_2000

3.Filesize：8.73MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：31.12 | - |
| west：91.01 | - | east：103.17 |
| - | south：29.01 | - |

5、Time frame:None--None

6、Reference method

References to data:

HUANG Ronggang, WANG Huini, JIANG Liming. Distribution data of typical freeze-thaw disasters along Sichuan Tibet Railway (2020). A Big Earth Data Platform for Three Poles, doi:10.11888/Disas.tpdc.2712852021

References to articles:

7、Supporting project information

Second Tibetan Plateau Scientific Expedition Program

8、Data resource provider

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