A Big Earth Data Platform for Three Poles

**Permafrost degradation increases risk and large future costs of infrastructure on the Third Pole**

1、Description

This is the predicted future permafrost hazard level data sets and the original data for Figure 2, 3, and 4 in Communications Earth & Environment publication (2022, 3, 238.doi: 10.1038/s43247-022-00568-6).

2、Keywords

Theme：Permafrost degradation;,freezing-thawing disaster,Permafrost,Frozen Ground
Discipline：Cryosphere
Places：Third Pole, Tibetan Plateau, High Mountain Asia
Time：2090, 2050

3、Data details

1.Scale：None

2.Projection：

3.Filesize：2.5MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：40.0 | - |
| west：73.0 | - | east：105.0 |
| - | south：26.0 | - |

5、Time frame:2007-12-31 16:00:00+00:00--2090-12-31 03:59:59+00:00

6、Reference method

References to data:

LI Xin, RAN Youhua, DONG Yuanhong , CHENG Guodong. Permafrost degradation increases risk and large future costs of infrastructure on the Third Pole. A Big Earth Data Platform for Three Poles, doi:10.11888/Cryos.tpdc.2727472022

References to articles:

Ran, Y.H., Cheng, G.D., Dong, Y.H., Hjort, J., Lovecraft, A. L., Kang, S. C., Tan, M. B., & Li X. Permafrost degradation increases risk and large future costs of infrastructure on the Third Pole. Communications Earth & Environment, 2022, 3, 238. https://doi.org/10.1038/s43247-022-00568-6

7、Supporting project information

8、Data resource provider

name: LI Xin
unit:
email: xinli@itpcas.ac.cn

name: RAN Youhua
unit:
email: ranyh@lzb.ac.cn

name: CHENG Guodong
unit:
email: gdcheng@lzb.ac.cn

name: DONG Yuanhong
unit: State Key Laboratory of Road Engineering Safety and Health in Cold and High-Altitude Regions, CCCC First Highway Consultants Co., LTD
email: dongyh@ccroad.com.cn