A Big Earth Data Platform for Three Poles

**Inventory of Permafrost Presence or Absence over the Tibetan Plateau (v1.0) (From 1950s)**

1、Description

Permafrost regions occupy about 46% of the exposed land area on the Tibetan Plateau (TP). Permafrost is a hidden phenomenon that cannot be easily observed, and its distribution is hence heavily dependent on in-situ observations. Four methods are used to derive permafrost presence or absence over the TP, including borehole temperature, soil pit, ground surface temperature, and ground-penetrating radar surveys. There are a total of 626 sites of permafrost presence or absence contained in the inventory. In order to apply the permafrost presence or absence inventory more broadly, the degree of confidence in the data is estimated and provided in the inventory. The inventory provided a baseline for the presence or absence of pernmafrost at point scale on the TP, and could be additionally used for permafrost simulation evalution.

2、Keywords

Theme：Permafrost,Frozen Ground  
Discipline：Cryosphere  
Places：Qinghai-Tibet Plateau  
Time：na

3、Data details

1.Scale：None

2.Projection：WGS84

3.Filesize：0.2MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：40.0 | - |
| west：70.0 | - | east：105.0 |
| - | south：25.0 | - |

5、Time frame:None--None

6、Reference method

References to data:

ZHOU Defu, ZOU Defu, ZHAO Lin, WU Qingbai, ZHANG Tingjun, CAO Bin, CAO Bin. Inventory of Permafrost Presence or Absence over the Tibetan Plateau (v1.0) (From 1950s). A Big Earth Data Platform for Three Poles, doi:10.11888/Geocry.tpdc.2712872019

References to articles:

Cao, B., Zhang, T., Wu, Q., Sheng, Y., Zhao, L., & Zou, D. (2019). Brief communication: Evaluation and inter-comparisons of Qinghai–Tibet Plateau permafrost maps based on a new inventory of field evidence, The Cryosphere, 13, 511–519, https://doi.org/10.5194/tc-13-511-2019.  
  
Cao, B., Li, X., Feng, M., & Zheng, D. (2021). Quantifying overestimated permafrost extent driven by rock glacier inventory. Geophysical Research Letters, 48, e2021GL092476. https://doi.org/10.1029/2021GL092476

7、Supporting project information

8、Data resource provider

name: WU Qingbai  
unit: Cold and Arid Regions Environmental and Engineering Research Institute, Chinese Academy of Sciences  
email: mawei@lzb.ac.cn  
  
name: ZHAO Lin  
unit: Cold and Arid Regions Environmental and Engineering Research Institute, Chinese Academy of Sciences  
email: linzhao@lzb.ac.cn  
  
name: CAO Bin  
unit: National Tibetan Plateau Data Center Institute, Institute of Tibetan Plateau, Chinese Academy of Sciences  
email: bin.cao@itpcas.ac.cn  
  
name: ZHANG Tingjun  
unit:   
email: tjzhang@lzu.edu.cn  
  
name: ZHOU Defu  
unit:   
email: defuzou@lzb.ac.cn  
  
name: CAO Bin  
unit:   
email: bin.cao@itpcas.ac.cn  
  
name: ZOU Defu  
unit: Northwest Institute of Eco–Environment and Resources, Chinese Academy of Sciences  
email: defuzou@lzb.ac.cn  
  
name: ZOU Defu  
unit:   
email: defuzou@lzb.ac.cn