A Big Earth Data Platform for Three Poles

**A dataset of soil carbon stock to 3m depth at Tibetan Plateau (2019)**

1、Description

The dataset based on synthesized data from 1114 sites across the Tibetan permafrost region which report that paleoclimate is more important than modern climate in shaping current permafrost carbon distribution.A new estimate of modern soil carbon stock to 3m depth on Tibetan permafrost region was derived by machine learning algorithm, including factors such as climate (paleoclimate and modern climate), vegetation, soil (soil thickness and soil physical and chemical properties, etc.) and topography. This dataset shows that ecosystem models clearly underestimated the Tibetan soil carbon stock, due to the absence of paleoclimate effects in the model. Future modelling of soil carbon cycling should include paleoclimate .

2、Keywords

Theme：Soil,Topography,NDVI,Vegetation,Soil thickness,Slope,soil carbon stock,soil geography,Altitude,permafrost,soil organic carbon stock,soil property
Discipline：Terrestrial Surface
Places：Tibetan Plateau
Time：2019

3、Data details

1.Scale：None

2.Projection：

3.Filesize：1.3MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：40.0 | - |
| west：23.0 | - | east：104.3 |
| - | south：26.0 | - |

5、Time frame:None--None

6、Reference method

References to data:

DING Jinzhi. A dataset of soil carbon stock to 3m depth at Tibetan Plateau (2019). A Big Earth Data Platform for Three Poles, doi:10.11888/Terre.tpdc.2724172022

References to articles:

Ding, J., Wang, T., Piao, S., Smith, P., Zhang, G., Yan, Z., Ren, S., Liu, D., Wang, S., Chen, S., Dai, F., He, J., Li, Y., Liu, Y., Mao, J., Arain, A., Tian, H., Shi, X., Yang, Y., Zeng, N., & Zhao, L. (2019). The paleoclimatic footprint in the soil carbon stock of the Tibetan permafrost region. Nature Communications, 10(1), 4195. doi:10.1038/s41467-019-12214-5.

7、Supporting project information

Second Tibetan Plateau Scientific Expedition Program

8、Data resource provider

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