A Big Earth Data Platform for Three Poles

**Permafrost soil bacteria in Barrow Peninsula, Arctic (2015)**

1、Description

This data includes the soil microbial composition data in permafrost of different ages in Barrow area of the Arctic. It can be used to explore the response of soil microorganisms to the thawing in permafrost of different ages. This data is generated by high through-put sequencing using the earth microbiome project primers are 515f – 806r. The region amplified is the V4 hypervariable region, and the sequencing platform is Illumina hiseq PE250; This data is used in the articles published in cryosphere, Permafrost thawing exhibits a greater influence on bacterial richness and community structure than permafrost age in Arctic permafrost soils. The Cryosphere, 2020, 14, 3907–3916, https://doi.org/10.5194/tc-14-3907-2020https://doi.org/10.5194/tc-14-3907-2020 . This data can also be used for the comparative analysis of soil microorganisms across the three poles.

2、Keywords

Theme：Biological Resources,Soil,Permafrost degradation,Bacterial species,Soil microorganisms,Active layer,Bacterial distribution,Permafrost,Frozen Ground
Discipline：Terrestrial Surface,Human-nature Relationship,Cryosphere
Places：Barrow, Antarctic
Time：past 5000 years

3、Data details

1.Scale：None

2.Projection：

3.Filesize：4000.0MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：71.45 | - |
| west：-156.067 | - | east：-156.117 |
| - | south：71.33 | - |

5、Time frame:None--None

6、Reference method

References to data:

KONG Weidong. Permafrost soil bacteria in Barrow Peninsula, Arctic (2015). A Big Earth Data Platform for Three Poles, doi:10.11888/Soil.tpdc.2712482021

References to articles:

Ji, M., Kong, W., Liang, C., Zhou, T., Jia, H., and Dong, X. (2020). Permafrost thawing exhibits a greater influence on bacterial richness and community structure than permafrost age in Arctic permafrost soils. The Cryosphere, 14, 3907–3916, https://doi.org/10.5194/tc-14-3907-2020.

7、Supporting project information

CASEarth:Big Earth Data for Three Poles（grant No. XDA19070000）

8、Data resource provider

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