A Big Earth Data Platform for Three Poles

**Data set of soil microbial diversity in Namco, Qinghai Tibet Plateau (2015)**

1、Description

This data includes the distribution data of soil bacteria in Namco region of the Qinghai Tibet Plateau, which can be used to explore the seasonal impact of fencing and grazing on soil microorganisms in Namco region. The sample was collected from May to September 2015, and the soil samples were stored in ice bags and transported back to the Ecological Laboratory of Beijing Institute of Qinghai Tibet Plateau Research; This data is the result of amplification sequencing, using MoBio Powersoil ™ Soil DNA was extracted with DNA isolation kit, and the primers were 515F (5 '- GTGCCAAGCGCCGGTAA-3') and 806R (5'GGACTACNVGGGTWTCTAAT-3 '). The amplified fragments were sequenced by Illumina Miseq PE250. The original data is analyzed by Qiime software, and then the similarity between sequences is calculated, and the sequences with a similarity of more than 97% are clustered into an OTU. The Greengenes reference library is used for sequence alignment to remove the sequence that only appears once in the database. The soil moisture content and soil temperature were measured by a soil hygrometer, and the soil pH was measured by a pH meter (Sartorius PB-10, Germany). The soil nitrate nitrogen (NO3 −) and ammonium nitrogen (NH4+) concentrations were extracted with 2 M KCl (soil/solution, 1:5), and analyzed with a Smartchem200 discrete automatic analyzer. This data set is of great significance to the study of soil microbial diversity in arid and semi-arid grasslands.

2、Keywords

Theme：Biological Resources,Grassland ecosystem,Diversity and distribution,Grassland  
Discipline：Terrestrial Surface,Human-nature Relationship  
Places：arid and semiarid, Tibetan Plateau  
Time：2015

3、Data details

1.Scale：None

2.Projection：

3.Filesize：1854.0MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：30.46 | - |
| west：90.1 | - | east：90.59 |
| - | south：30.1 | - |

5、Time frame:2015-04-30 16:00:00+00:00--2015-09-15 03:59:59+00:00

6、Reference method

References to data:

KONG Weidong. Data set of soil microbial diversity in Namco, Qinghai Tibet Plateau (2015). A Big Earth Data Platform for Three Poles, doi:10.1002/ldr.36262022

References to articles:

Fan, D. D., Kong, W. D., Wang, F., Yue, L. Y., & Li, X. Z. (2020). Fencing decreases microbial diversity but increases abundance in grassland soils on the Tibetan Plateau. Land Degradation & Development, 31(17), 2577-2590.

7、Supporting project information

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

8、Data resource provider

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