A Big Earth Data Platform for Three Poles

**Dataset of digital soil mapping products for the Qinghai-Tibet Plateau (2015-2024)**

1、Description

Based on the "second Qinghai Tibet Plateau comprehensive scientific investigation" and "China's soil series investigation and compilation of China's soil series" "The obtained soil survey profile data, using predictive Digital Soil Mapping paradigm, using geographic information and remote sensing technology for fine description and spatial analysis of the soil forming environment, developed adaptive depth function fitting methods, and integrated advanced ensemble machine learning methods to generate a series of soil attributes (soil organic carbon, pH value, total nitrogen, total phosphorus, total potassium, cation exchange capacity, gravel content (>2mm) in the Qinghai Tibet plateau region." , sand, silt, clay, soil texture type, unit weight, soil thickness, etc.) and quantify the spatial distribution of uncertainty. Compared with the existing soil maps, it better represents the spatial variation characteristics of soil properties in the Qinghai Tibet Plateau. The data set can provide soil information support for the study of soil, ecology, hydrology, environment, climate, biology, etc. in the Qinghai Tibet Plateau.

2、Keywords

Theme：Soil,soil spatial variation,Soil thickness,soil geography,digital soil mapping,Soil texture,soil property
Discipline：Terrestrial Surface
Places：Qinghai-Tibet Plateau
Time：2015-2024

3、Data details

1.Scale：None

2.Projection：Albers

3.Filesize：6615.04MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：40.68 | - |
| west：73.37 | - | east：105.93 |
| - | south：25.45 | - |

5、Time frame:None--None

6、Reference method

References to data:

ZHANG Ganlin, LIU Feng. Dataset of digital soil mapping products for the Qinghai-Tibet Plateau (2015-2024). A Big Earth Data Platform for Three Poles, doi:10.11888/Terre.tpdc.2724822022

References to articles:

Liu, F., Zhang, G.L., Song, X.D., Li, D.C., Zhao, Y.G., Yang, J.L., Wu, H.Y., & Yang, F. (2020). High-resolution and three-dimensional mapping of soil texture of China. Geoderma, 361, 114061.

Liu F, Wu H, Zhao Y, Li D, Yang J-L, Song X, Shi Z, Zhu A-X, Zhang G-L. Mapping high resolution National Soil Information Grids of China. Science Bulletin, 2022, 67(3): 328-340.

7、Supporting project information

Soil Series Inventory Survey and Compilation of “Soil Series of China”
The 2nd Comprehensive Scientific Survey of the Qinghai-Tibet Plateau

8、Data resource provider

name: ZHANG Ganlin
unit:
email: glzhang@issas.ac.cn

name: LIU Feng
unit: Institute of Soil Science, Chinees Academy of Sciences
email: zsun@issas.ac.cn