A Big Earth Data Platform for Three Poles

**Digital soil mapping dataset of soil depth in the Heihe River Basin (2012-2014)**

1、Description

The data of this data set comes from the soil profile data integrated by the major research plan integration project of Heihe River Basin (soil data integration and soil information product generation of Heihe River Basin, 91325301). The prediction method is mainly based on the soil landscape model. The basic theory of the model is the classic soil genesis theory. The model regards the soil as the product of the comprehensive effects of climate, topography, parent material, biology and time.
Scope: Heihe River Basin;
Projection: Albers ﹣ conic ﹣ equal ﹣ area;
Spatial resolution: 90m;
Data format: ArcGIS grid;
Data content: spatial distribution of soil thickness
Prediction method: enhanced regression tree
Environmental variables: main soil forming factors

2、Keywords

Theme：Soil,Soil thickness
Discipline：Terrestrial Surface
Places：Heihe River Basin
Time：2012-2014

3、Data details

1.Scale：None

2.Projection：None

3.Filesize：472.0MB

4.Data format：ArcGIS Grid

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：42.687 | - |
| west：97.0667 | - | east：101.99 |
| - | south：37.6893 | - |

5、Time frame:2012-01-05 08:00:00+00:00--2015-01-04 19:59:59+00:00

6、Reference method

References to data:

ZHANG Ganlin. Digital soil mapping dataset of soil depth in the Heihe River Basin (2012-2014). A Big Earth Data Platform for Three Poles, doi:10.3972/heihe.016.2017.db2017

References to articles:

易晨, 李德成, 张甘霖, 赵玉国, 杨金玲, & 刘峰, et al. . 土壤厚度的划分标准与案例研究. 土壤学报, 052(1), 220-227.

Song, X.D., Brus, D.J., Liu, F., Li, D.C., Zhao, Y.G., Yang, J.L., Zhang, G.L. (2016). Mapping soil organic carbon content by geographically weighted regression: A case study in the Heihe River Basin, China. Geoderma, 261: 11–22.

Yang, R.M., Zhang, G.L, Liu, F., Lu, Y.Y., Yang, F., Yang, F., Yang, M., Zhao, Y.G., Li, D.C. (2016). Comparison of boosted regression tree and random forest models for mapping topsoil organic carbon concentration in an alpine ecosystem. Ecological Indicators, 60, 870–878.

7、Supporting project information

8、Data resource provider

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