A Big Earth Data Platform for Three Poles

**China soil map based harmonized world soil database (HWSD) (v1.1) (2009)**

1、Description

The data is based on the Harmonized World Soil Database version 1.1 (HWSD) constructed by the Food and Agriculture Organization of the United Nations (FAO) and the Vienna International Institute for Applied Systems (IIASA). The data source of China is 1: 1 million soil data in the second national land survey provided by the Nanjing Soil Research Institute. The data can provide model input parameters for modelers, in agricultural perspective, it can be used to study eco-agricultural zoning, food security and climate change. The data format is grid and the projection is WGS84. The soil classification system used is mainly FAO-90.   
The main fields of the soil property table include:  
SU\_SYM90 (the soil name in the FAO90 soil classification system);  
SU\_SYM85 (FAO85 classification);  
T\_TEXTURE (top soil texture);  
DRAINAGE (19.5);  
REF\_DEPTH (soil reference depth);  
AWC\_CLASS (19.5);  
AWC\_CLASS (soil effective water content);  
PHASE1: Real (soil phase);  
PHASE2: String (soil phase);  
ROOTS: String (depth classification with obstacles to the bottom of the soil);  
SWR: String (soil moisture characteristics);  
ADD\_PROP: Real (a specific soil type related to agricultural use in the soil unit);  
T\_GRAVEL: Real (gravel volume percentage);  
T\_SAND: Real (sand content);  
T\_SILT: Real (silt content);  
T\_CLAY: Real (clay content);  
T\_USDA\_TEX: Real (USDA soil texture classification);  
T\_REF\_BULK: Real (soil bulk density);  
T\_OC: Real (organic carbon content);  
T\_PH\_H2O: Real (pH)  
T\_CEC\_CLAY: Real (cation exchange capacity of clay soil);  
T\_CEC\_SOIL: Real (cation exchange capacity of soil)  
T\_BS: Real (basic saturation);  
T\_TEB: Real (exchangeable base);  
T\_CACO3: Real (carbonate or lime content)  
T\_CASO4: Real (sulfate content);  
T\_ESP: Real (exchangeable sodium salt);  
T\_ECE: Real (conductivity).  
The attribute field beginning with T\_ indicates the upper soil attribute (0-30cm), and the attribute field beginning with S\_ indicates the lower soil attribute (30-100cm).  
For the meaning of specific attribute values, please refer to the documentation \* .pdf and database \* .mdb in the folder.

2、Keywords

Theme：Soil,Organic matter,Soil texture,Soil moisture/Water content  
Discipline：Terrestrial Surface  
Places：China  
Time：2009

3、Data details

1.Scale：None

2.Projection：None

3.Filesize：43.2MB

4.Data format：ENVI Image

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：53.9 | - |
| west：73.2 | - | east：135.5 |
| - | south：17.8 | - |

5、Time frame:None--None

6、Reference method

References to data:

Food and Agriculture Organization of the United Nations（FAO）, International Institute for Applied Systems Analysis. China soil map based harmonized world soil database (HWSD) (v1.1) (2009). A Big Earth Data Platform for Three Poles, 2019

References to articles:

Fischer, G., Nachtergaele, F., Prieler, S., van Velthuizen, H.T., Verelst, L., & Wiberg, D. (2008). Global Agro-ecological Zones Assessment for Agriculture (GAEZ 2008). IIASA, Laxenburg, Austria and FAO, Rome, Italy.

7、Supporting project information

8、Data resource provider

name: Food and Agriculture Organization of the United Nations（FAO）  
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name: International Institute for Applied Systems Analysis  
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