Upper Yangtze River Scientific Data Center

**Remote sensing based data set of surface soil moisture in the upper reaches of the Yangtze River in China (2003-2020)**

1、Description

The remote sensing based global surface soil water decadence data set (RSSSM, 2003~2020) is based on 11 commonly used global microwave remote sensing soil water data products in the world, using neural network method and incorporating 9 microwave remote sensing inversion of soil water quality impact factors. The spatial resolution of data is 0.1 degree, and the temporal resolution is ten days. The original data covers 2003-2018 and is now updated to 2020. The RSSSM data set has outstanding time continuity, achieving full space coverage except for ice, snow and water. Through the test of global measured data, it can be proved that RSSSM data set has higher spatial and temporal pattern accuracy than the existing global or regional long time series topsoil aquatic products. In addition, although the RSSSM data is based on remote sensing and does not incorporate any precipitation data, its interannual variation is well consistent with the temporal variation of precipitation (such as GPM IMERG precipitation data) and standardized evapotranspiration index (SPEI). RSSSM data can also reflect the impact of human activities such as urbanization, farmland irrigation and vegetation restoration on soil moisture to a certain extent. The data is in tiff format, and the compressed data volume is 2.48 GB. The data paper will be published in Earth System Science Data in 2021. Based on the original data, this data is cut to obtain the upper reaches of the Yangtze River in China.

2、Keywords

Theme：Soil,Soil moisture,microwave remote sensing,Terrestrial Surface Remote Sensing
Discipline：Terrestrial Surface
Places：upper reaches of the Yangtze River
Time：2003-2020

3、Data details

1.Scale：None

2.Projection：

3.Filesize：80.0MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：36.0 | - |
| west：90.0 | - | east：112.0 |
| - | south：25.0 | - |

5、Time frame:None--None

6、Reference method

References to data:

FU Bojie, CHEN Yongzhe, FENG Xiaoming. Remote sensing based data set of surface soil moisture in the upper reaches of the Yangtze River in China (2003-2020). Upper Yangtze River Scientific Data Center, 2022

References to articles:

Chen, Y., Feng, X., & Fu, B. (2021). An improved global remote-sensing-based surface soil moisture (RSSSM) dataset covering 2003–2018, Earth Syst. Sci. Data, 13, 1–31, https://doi.org/10.5194/essd-13-1-2021

7、Supporting project information

8、Data resource provider

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