A Big Earth Data Platform for Three Poles

**Dataset of soil water erosion modulus with 2.5 m resolution in 22 watersheds of the Xinjiang Uygur Autonomous Region（2019）**

1、Description

1) The data includes the soil erosion modulus of 22 watersheds with a resolution of 2.5 m in the year of 2019 in the Xinjiang Uygur Autonomous Region. 2）Based on the surface layer of rainfall erosivity R, soil erodibility K, slope length factor LS, vegetation coverage FVC, and rotation sampling survey unit, the Chinese soil erosion model (CSLE) was used to calculate soil erosin modulus in 22 watersheds respectively. Through spatial data processing (including chart linking and transformation, vector-grid conversion, and resampling), R, K, LS factors were calculated from the regional thematic map of rainfall erosivity, soil erodibility, and DEM. By half-month FVC, NPV, half-month rainfall erosivity data, we calculated the value of B factors in each sampling watershed. The value of E factor was calculated based on the remote sensing interpretation result and engineering measure factor table. The value of tillage factor T was obtained from tillage zoning map and tillage measure table. And then the soil erosion modulus in each sampling watershed was calculated by the equation: A=R•K•LS•B•E•T. The selection of 22 watersheds was based on the layout of sampling survey in pan-third polar region. 3) Compared with the data of soil erosion intensity in the same region in the same year, there is no significant difference and the data quality is good.4) the data of soil erosion modulus is of great significance for studying the present situation of soil erosion in Pan third polar region, and it is also crucial for the implementation of the development policy of the Silk Road Economic Belt and the 21st-Century Maritime Silk Road.

2、Keywords

Theme：Soil reosion,Water and soil loess,Natural Disaster
Discipline：Human-nature Relationship
Places：Xinjiang Uygur Autonomous Region
Time：2019

3、Data details

1.Scale：None

2.Projection：WGS84

3.Filesize：14.5MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：43.942443 | - |
| west：85.747743 | - | east：87.88328 |
| - | south：42.665961 | - |

5、Time frame:None--None

6、Reference method

References to data:

YANG Qinke. Dataset of soil water erosion modulus with 2.5 m resolution in 22 watersheds of the Xinjiang Uygur Autonomous Region（2019）. A Big Earth Data Platform for Three Poles, doi:10.11888/Disas.tpdc.2704502020

References to articles:

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Zhang, J.Q., Zhang, C.L., Li, Q., & Pan, X.H. (2019). Grain-size distribution of surface sediments of climbing and falling dunes in the Zedang valley of the Yarlung Zangbo River, southern Tibetan plateau. Journal of Earth System Science, 128, 1-11.

7、Supporting project information

8、Data resource provider

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