A Big Earth Data Platform for Three Poles

**Dataset of soil water erosion modulus with 5 m resolution in 11 watersheds of Tibet (2018)**

1、Description

1) The data includes the soil erosion modulus of 11 watersheds with a resolution of 5 m in the year of 2017 in Tibet. 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 11 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 results 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 11 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 erosion,Soil reosion,Natural Disaster,Environment Pollution and Control
Discipline：Human-nature Relationship
Places：Tibet
Time：2018

3、Data details

1.Scale：None

2.Projection：WGS84

3.Filesize：15.7MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：29.998369 | - |
| west：88.130135 | - | east：94.75069 |
| - | south：29.143441 | - |

5、Time frame:2018-09-08 08:00:00+00:00--2019-01-07 08:00:00+00:00

6、Reference method

References to data:

YANG Qinke. Dataset of soil water erosion modulus with 5 m resolution in 11 watersheds of Tibet (2018). A Big Earth Data Platform for Three Poles, doi:10.11888/Disas.tpdc.2702272019

References to articles:

刘宝元, 郭索彦, 李智广, 谢云, 张科利, 刘宪春. (2013). 中国水力侵蚀抽样调查. 中国水土保持, 10, 26-34.

国务院第一次全国水利普查领导小组办公室. 第一次全国水利普查培训教材之六—水土保持情况普查[M]. 2010.11, 北京: 中国水利水电出版社.

7、Supporting project information

Pan-Third Pole Environment Study for a Green Silk Road-A CAS Strategic Priority A Program

8、Data resource provider

name: YANG Qinke
unit: Northwestern University
email: qkyang@ms.iswc.ac.cn