A Big Earth Data Platform for Three Poles

**Topographic Sheltering Index data set of Qinghai Tibet Plateau (250m)**

1、Description

It has been a difficult problem to explore the mechanism of geomorphic influence on the distribution pattern of trees in Qinghai Tibet Plateau, and how to show the geomorphic influence more accurately. According to the field and literature survey, it is found that under the better terrain shelter, both the growth of arbor and shrub vegetation has a positive effect. This effect mainly includes the sheltering of wind by terrain and the increase of soil moisture and air humidity by terrain water accumulation. In this study, 250mdem is used to simulate the effect of vegetation occlusion, which is called Topographic Sheltering Index (TSI). C language is used to program and calculate the cumulative horizontal angle of obstacles at the target point. The judgment condition of obstacles is that the distance between the obstacles and the target point is less than 15-20 times of the height difference between the obstacles and the target point, and the multiple is adjustable, which is selected as 15 times according to the actual situation of the plateau, Taking 8km as the search radius and 10 degrees as the search angle), the Topographic Sheltering Index of the Qinghai Tibet Plateau is obtained.

2、Keywords

Theme：Ecological remote sensing products,Land surface product,Terrestrial Surface Remote Sensing  
Discipline：Terrestrial Surface  
Places：Qinghai Tibet Plateau  
Time：In the past 200 years

3、Data details

1.Scale：None

2.Projection：WGS84

3.Filesize：517.0MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：26.003333 | - |
| west：73.314444 | - | east：104.783056 |
| - | south：39.780556 | - |

5、Time frame:None--None

6、Reference method

References to data:

CHENG Ming, ZHOU Yaozhi, TIAN Rui. Topographic Sheltering Index data set of Qinghai Tibet Plateau (250m). A Big Earth Data Platform for Three Poles, 2021

References to articles:

7、Supporting project information

National Key Research and Development Program of China

8、Data resource provider

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