A Big Earth Data Platform for Three Poles

**Slope data of the Green Silk Road (Version 1.0)**

1、Description

The slope dataset of the Green Silk Road, which represent the tilts of the land surface units, is a quantitative description for land surface steepness. This dataset calculated from GMTED2010 (Multi-resolution Terrain Elevation Data 2010) which product by USGS (United States Geological Survey). First, the DEM (Digital Elevation Model) of Green Silk Road are obtained by the preprocessing including projection, clipping for the GMTED2010. Second, the slopes are calculated by using the degree method in ArcGIS software to generate the slope dataset of the green Silk Road. This dataset is of good quality and can accurately reflect the land surface tilt of the Green Silk Road areas. It can be used in the fields of Surveying and mapping, remote sensing, environmental resources, agricultural and forestry land planning, urban planning, disaster monitoring, hydropower engineering, military and other resources, environment and social economy.

2、Keywords

Theme：Topography,Slope  
Discipline：Terrestrial Surface  
Places：The Green Silk Road  
Time：2010

3、Data details

1.Scale：None

2.Projection：None

3.Filesize：1146.88MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：82.0 | - |
| west：-180.0 | - | east：180.0 |
| - | south：-11.0 | - |

5、Time frame:2010-01-10 00:00:00+00:00--2011-01-09 00:00:00+00:00

6、Reference method

References to data:

Xiaohuan Yang. Slope data of the Green Silk Road (Version 1.0). A Big Earth Data Platform for Three Poles, doi:10.11888/Geogra.tpdc.2704952019

References to articles:

封志明, 唐焰, 杨艳昭, 张丹. (2007). 中国地形起伏度及其与人口分布的相关性. 地理学报, 62(10), 1073-1082.  
  
姜鲁光, 封志明, 杨艳昭, 游珍. (2012). 基于DEM 数据的澜沧江－湄公河流域地形起伏度研究. 云南大学学报( 自然科学版), 34(4), 393-400.  
  
Xiao, C. W., Li, P., & Feng, Z. M. (2018). Re-delineating mountainous areas with three topographic parameters in Mainland Southeast Asia using ASTER global digital elevation model data. Journal of Mountain Sciences, 15(8), 1728-1740.  
  
Xiao, C. W., Feng, Z. M., Li, P., You, Z., & Teng, J. K. (2018). Evaluating the suitability of different terrains for sustaining human settlements according to the local elevation range in China using the ASTER GDEM. Journal of Mountain Sciences, 15(12), 2741-2751.

7、Supporting project information

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

8、Data resource provider

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