A Big Earth Data Platform for Three Poles

**Geomorphological data of Qilian Shan (2020)**

1、Description

The river steepness index, concavity index, drainage area, hypsometric integral, erosion coefficient, erosion rate, precipitation and other Geomorphological data of Qilian Shan basins are extracted and collected. Where the river steepness index and concavity index were extracted based on the SRTM (Shuttle Radar Topography Mission) 3 arc-seconds DEM data, the catchment erosion rate are from Palumbo et al. (2010) and Palumbo et al. (2011), and the precipitation data is from Geng et al. (2017). In order to increase the credibility of the data, the range of the river steepness index of each basin is given when the confidence is 95%. The data laid a foundation for the analysis of the relationship between the geomorphic characteristics and the tectonic framework of Qilian Shan.

2、Keywords

Theme：Geomorphological,Tectonics  
Discipline：Others,Solid earth  
Places：Qilian Shan  
Time：2020

3、Data details

1.Scale：None

2.Projection：UTM

3.Filesize：0.016MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：40.0 | - |
| west：97.0 | - | east：101.5 |
| - | south：38.0 | - |

5、Time frame:2019-12-31 16:00:00+00:00--2020-12-31 03:59:59+00:00

6、Reference method

References to data:

HU Xiaofei, ZHANG Yanan. Geomorphological data of Qilian Shan (2020). A Big Earth Data Platform for Three Poles, doi:10.11888/Geogra.tpdc.2711142021

References to articles:

Palumbo, L., Hetzel, R., Tao, M., & Li, X. (2010). Topographic and lithologic control on catchment-wide denudation rates derived from cosmogenic 10Be in two mountain ranges at the margin of NE Tibet. Geomorphology, 117(1-2), 130-142.  
  
Palumbo, L., Hetzel, R., Tao, M., & Li, X. (2011). Catchment-wide denudation rates at the margin of NE Tibet from in situ-produced cosmogenic 10Be. Terra Nova, 23(1), 42-48. doi:10.1111/j.1365-3121.2010.00982.x  
  
Geng, H., Pan, B., Huang, B., Cao, B., & Gao, H. (2017). The spatial distribution of precipitation and topography in the Qilian Shan Mountains, northeastern Tibetan Plateau. Geomorphology, 297, 43-54. doi:10.1016/j.geomorph.2017.08.050

7、Supporting project information

Second Tibetan Plateau Scientific Expedition Program

8、Data resource provider

name: ZHANG Yanan  
unit: Lznzhou University  
email: zhangyn17@lzu.edu.cn  
  
name: HU Xiaofei  
unit: Lanzhou University  
email: feixhu@lzu.edu.cn