A Big Earth Data Platform for Three Poles

**Integration dataset of Tibet Plateau boundary**

1、Description

This dataset contains five types of boundaries.
 1. TPBoundary\_ 2500m: Based on ETOPO5 Global Surface Relief, ENVI+IDL was used to extract data at an elevation of 2500m within the longitude (65~105E) and latitude (20~45N) range in the Tibetan Plateau.
 2. TPBoundary\_ 3000m: Based on ETOPO5 Global Surface Relief, ENVI+IDL was used to extract data at an elevation of 3000m within the longitude (65~105E) and latitude (20~45N) range in the Tibetan Plateau.
 3. TPBoundary\_ HF (high\_frequency): This boundary is defined according to 2 previous studies. Bingyuan Li (1987) had a systematic discussion on the principles for determining the extent of the Tibetan Plateau and the specific boundaries. From the perspective of the formation and basic characteristics of the Tibetan Plateau, he proposed the basic principles for determining the extent of the Tibetan Plateau based on the geomorphological features, the plateau surface and its altitude, while considering the integrity of the mountain. Yili Zhang (2002) determined the extent and boundaries of the Tibetan Plateau based on the new results of research in related fields and years of field practice. He combined information technology methods to precisely locate and quantitatively analyze the extent and boundary location of the Tibetan Plateau, and concluded that the Tibetan Plateau in China extends from the Pamir Plateau in the west to the Hengduan Mountains in the east, from the southern edge of the Himalayas in the south to the northern side of the Kunlun-Qilian Mountains in the north. On April 14, 2017, the Ministry of Civil Affairs of the People's Republic of China issued the Announcement on Adding Geographical Names for Public Use in the Southern Tibetan Region (First Batch), adding six geographical names in the southern Tibetan region, including Wo’gyainling, Mila Ri, Qoidêngarbo Ri, Mainquka, Bümo La, and Namkapub Ri.
４. TPBoundary\_ New (2021): Along with the in-depth research on the Tibetan Plateau, the improvement of multidisciplinary research and understanding inside and outside the plateau, and the progress of geographic big data and Earth observation science and technology, the development of the 2021 version of the Tibetan Plateau boundary data by Yili Zhang and et al. was completed based on the comprehensive analysis of ASTER GDEM and Google Earth remote sensing images. The range boundary starts from the northern foot of the West Kunlun Mountain-Qilian Mountain Range in the north and reaches the southern foot of the Himalayas and other mountain ranges in the south, with a maximum width of 1,560 km from north to south; from the western edge of the Hindu Kush Mountains and the Pamir Plateau in the west to the eastern edge of the Hengduan Mountains and other mountain ranges in the east, with a maximum length of about 3,360 km from east to west; the latitude and longitude range is 25°59′30″N~40°1′0″N, 67°40′37″E~104°40′57″E, with a total area of 3,083,400km2 and an average altitude of about 4,320m. Administratively, the Tibetan Plateau is distributed in nine countries, including China, India, Pakistan, Tajikistan, Afghanistan, Nepal, Bhutan, Myanmar, and Kyrgyzstan.
５. TPBoundary\_ Rectangle: The rectangle was drawn according to the range of Lon (63~105E) and Lat (20~45N). The data are in latitude and longitude projection WGS84.
As the basic data, the boundary of the Tibetan Plateau can be used as a reference basis for various geological data and scientific research on the Tibetan Plateau.

2、Keywords

Theme：Division,River basin regional,Natural division
Discipline：Human-nature Relationship
Places：Tibetan Plateau
Time：2021, 2016

3、Data details

1.Scale：None

2.Projection：

3.Filesize：0.146MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：45.0 | - |
| west：65.0 | - | east：105.0 |
| - | south：20.0 | - |

5、Time frame:None--None

6、Reference method

References to data:

ZHANG Yili. Integration dataset of Tibet Plateau boundary. A Big Earth Data Platform for Three Poles, doi:10.11888/Geogra.tpdc.2700992019

References to articles:

张镱锂, 李炳元, 郑度. (2014).《论青藏高原范围与面积》一文数据的发表：青藏高原 范围界线与面积地理信息系统数据. 全球变化科学研究数据出版系统. DOI: 10.3974/ geodb.2014.01.12.v1，http://www.geodoi.ac.cn/doi.aspx?doi=10.3974/geodb.2014.01.12.v1

张镱锂, 李炳元, 刘林山, 郑度. (2021). 再论青藏高原范围. 地理研究, 40(6), 1543-1553.

张镱锂, 刘林山, 李炳元等. (2021). 青藏高原界线2021年版数据集. 全球变化数据仓储电子杂志. https://doi.org/10.3974/geodb.2021.07.10.V1.CSTR:20146.11.2021.07.10.V1

张镱锂, 刘林山, 李炳元, 郑度. (2021). 青藏高原范围数据集 2021年版与2014年版比较. 全球变化数据学报. 5(4), 32-42. https://doi.org/10.3974/geodp.2021.04.04. CSTR:20146.14.2021.04.04.

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: ZHANG Yili
unit:
email: zhangyl@igsnrr.ac.cn