A Big Earth Data Platform for Three Poles

**Actual livestock carrying capacity estimation product in Qinghai-Tibet Plateau (2000-2019)**

1、Description

Actual carrying capacity refers to the actual number of livestock that can be raised on a certain area of grassland during a certain utilization period. The actual carrying capacity is obtained through statistical yearbooks from various provinces (regions) and cities (prefectures) on the Qinghai Tibet Plateau, as well as statistical data provided by animal husbandry management departments. There are multiple statistical calibers in the statistical data, such as inventory, output, output rate, and year-end livestock quantity. This dataset uniformly adopts the year-end livestock inventory as the calculation standard for actual carrying capacity based on the statistical data of each region. A multiple linear regression was conducted using the actual carrying capacity in the statistical yearbook with population density, NPP, and terrain undulation to establish a spatial model for actual carrying capacity. Grid data of actual carrying capacity (sheep units, MU/km2) were obtained, with a time series from 2000 to 2019 and a spatial resolution of 250 meters. Using statistical data from the core pastoral areas of the Qinghai Tibet Plateau, including Guoluo Prefecture, Yushu Prefecture, Changdu City, Nagqu City, Aba Prefecture, Ganzi Prefecture, and Gannan Prefecture, it was verified that the average absolute error of spatialization was 27.48 MU/km2, and the average relative error was 13.79%. This dataset can analyze the spatiotemporal variation characteristics of actual livestock carrying capacity on the Qinghai Tibet Plateau, evaluate the carrying characteristics of grasslands on the Qinghai Tibet Plateau, extract transitional grazing areas, and has important application value for ecological protection, monitoring, and early warning on the Qinghai Tibet Plateau.

2、Keywords

Theme：Grassland ecosystem,Biomass,Terrestrial Surface Remote Sensing,Grassland  
Discipline：Terrestrial Surface  
Places：Qinghai Tibet Plateau  
Time：2000-2019

3、Data details

1.Scale：None

2.Projection：WGS84

3.Filesize：9300.0MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：43.887225 | - |
| west：73.132818 | - | east：105.732465 |
| - | south：21.709277 | - |

5、Time frame:1999-12-31 16:00:00+00:00--2019-12-30 16:00:00+00:00

6、Reference method

References to data:

LIU Bintao. Actual livestock carrying capacity estimation product in Qinghai-Tibet Plateau (2000-2019). A Big Earth Data Platform for Three Poles, doi:10.11888/Ecolo.tpdc.2715132021

References to articles:

7、Supporting project information

Second Tibetan Plateau Scientific Expedition Program

8、Data resource provider

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