A Big Earth Data Platform for Three Poles

**1 km grid datasets of human activity intensity in agricultural and pastoral areas of the Qinghai-Tibet Plateau**

1、Description

As the “third pole” of the world, the Qinghai-Tibet Plateau (QTP) is extremely ecologically sensitive and fragile while facing increasing human activities and overgrazing. In this study, eight types of spatial data were firstly selected, including grazing intensity, Night-Time Light, population density, Gross Domestic Product (GDP) density, the ratio of cultivated land, the slope of the Normalized Difference Vegetation Index (NDVI), distance to road, and distance to town. Then, the entropy weight method was applied to determine the weight of each factor. Finally, the five-year interval human activity intensity data in 1990, 1995, 2000, 2005, 2010 and 2015 were made in the agricultural and pastoral areas of QTP through the spatial overlap method. By preparing the historical spatial datasets of human activity intensity, our study will help to explore the influence of human disturbance on the alpine ecosystems on the QTP and provide effective support for decision-making of government aiming at regional ecosystem management and sustainable development.

2、Keywords

Theme：Population,Environment Pollution and Control
Discipline：Human-nature Relationship
Places：the Tibetan Plateau
Time：1990-2015

3、Data details

1.Scale：None

2.Projection：Albers

3.Filesize：63.6MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：39.83 | - |
| west：73.45 | - | east：104.67 |
| - | south：25.99 | - |

5、Time frame:1989-12-31 16:00:00+00:00--2015-12-30 16:00:00+00:00

6、Reference method

References to data:

LIU Shiliang, LI Mingqi, SUN Yongxiu, LIU Yixuan. 1 km grid datasets of human activity intensity in agricultural and pastoral areas of the Qinghai-Tibet Plateau. A Big Earth Data Platform for Three Poles, doi:10.11922/sciencedb.001712021

References to articles:

Chang, S., Wang, J., Zhang, F., Niu, L. & Wang, Y. (2020). A study of the impacts of urban expansion on vegetation primary productivity levels in the Jing-Jin-Ji region, based on nighttime light data. Journal of Cleaner Production, 263, 121490.

陈颖彪, 郑子豪, 吴志峰, 千庆兰. (2019). 夜间灯光遥感数据应用综述和展望. 地理科学进展, 38, 205-223.

Letu, H., Hara, M., Yagi, H., Naoki, K., Tana, G., Nishio, F. & Shuhei, O. (2010). Estimating energy consumption from night-time DMPS/OLS imagery after correcting for saturation effects. International Journal of Remote Sensing, 31, 4443-4458.

7、Supporting project information

Second Tibetan Plateau Scientific Expedition Program

8、Data resource provider

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