

Estimation of Grassland Production in the Three-River Source Region Based on Remote Sensing

Data Documentation

I. Dataset content features

i. Abstract

Grassland is not only the important ecological barrier, but also but also a natural resource for people's production and life. An accurate estimation of grassland production can provide scientific basis for informed decision-making on regional resource exploitation and socio-economic sustainable development. The dataset of grassland production in the Three-River Source Region contains information on the temporal and spatial changes of grassland production in the region from 2006 to 2015. The data sources of this dataset are measurement data, remote sensing data and auxiliary data. The first part was the ground measurement data of 30 samples in the Three-River Source Region, of which 24 points were modeled and 6 points were used for model verification. There were 9 sampling points of measured data from the Three-River Source Region. The sampling time was from late July to early August in 2006, 2008, 2010, 2011, and 2014, and 21 sample data from the related papers were quoted. The second part was three kinds of MODIS product data, namely MOD13Q1, MOD17A2 and MOD17A2H. The third part was the national natural grassland type map, the administrative map of the Three-River Source Region, the vector boundary map, topographic data, land cover data, social economic data, precipitation data and other ancillary data. After image processing such as data splicing, projection transformation, and boundary clipping, the estimation data of grassland production in the Three-River Source Region from 2006 to 2015 was generated.

ii. Temporal cover

Time of the dataset ranged from 2006 to 2015.

iii. Spatial cover

The spatial scope of this dataset is the Three-River Source Region, China.

II. Subject/industry scope of dataset/atlas

i. Subject scope

Earth Science, Remote Sensing.

ii. Industry scope

Natural science research, Environmental monitoring, Natural conservation, et al.

iii. Other classifications (optional)

III. Accuracy of dataset/atlas

i. Time frequency

Annually.

ii. Spatial reference, accuracy, and granularity

The spatial reference of the dataset was WGS_1984_UTM_Zone_46N, with a spatial resolution of 500 meters.

IV. Dataset/atlas storage management

i. Data quantity

The volume of the dataset was 17MB.

ii. Type format

The dataset was stored in hard disk with a format of TIF.

iii. Update management

Unscheduled update.

V. Quality control of the dataset/atlas

i. Production mode

Based on data such as MOD13Q1, MOD17A2, and MOD17A2H, the grassland production of the Three-River Source Region from 2006 to 2015 was estimated.

ii. Data sources (condition selection)

Data. Source: MODIS Web, data download URL: ladsweb.nascom.nasa.gov

iii. Methods of the data acquisition and processing (condition selection)

This dataset use MOD13Q1, MOD17A2, and MOD17A2H remote sensing data as data sources, the data resolution is 500m. With the ArcGIS software platform, data preprocessing such as projection conversion, boundary cutting was performed. The grassland production in the Three-River Source Region was estimated by statistical modeling and optimal model selection.

VI. Sharing and usage method of the dataset/atlas

i. Sharing methods and restrictions

Full and open sharing.

ii. Contact information of the sharing service (condition selection)

iii. Conditions and methods of usage

The dataset can be read by ArcGIS software.

VII. Intellectual property rights of the dataset/atlas

i. Property rights (optional)

Intellectual property of the dataset belonged to Institute of Geographic Sciences and Natural Resources Research, CAS.

ii. Reference method of the dataset/atlas

iii. Usage contacts of the datasets/atlas

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VIII. Others (optional)

In addition to the above, other information must also be explained.

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