Vegetation Phenology Data Set of Mongolia from 2001 to 2019

Data Documentation

I. Dataset/atlas content features

i. Abstract

This data set consists of the annual and average data of the start of growing season (SOS), end of growing season (EOS), and length of growing season (LOS) in Mongolian vegetation from 2001 to 2019. This dataset was composed of 60 raster files. They are produced by the Institute of Geographical Sciences and Natural Resources Research of the Chinese Academy of Sciences. This dataset reveals differences in the temporal and spatial distribution of vegetation phenology in Mongolia, and provides basic reference data for the study of vegetation phenology and climate change in the Mongolian Plateau.

ii. Elements (content fields)

This dataset was named as "Vegetation Phenology Data Set of Mongolia from 2001 to 2019", which included 3 data files. There are mainly 1 data name for different years and they are described as table 1.

Table 1 Description of data element content

Data name	Item (field)	Field name in Chinese	Field measure unit	Field code description	Remarks
Vegetation Phenology Data Set of Mongolia from 2001 to 2019					

iii. Temporal cover

From 2001 to 2019.

iv. Spatial cover

41° 35′ -52° 09′ N, 87° 44′ -119° 56′ E.

II. Subject/industry scope of dataset/atlas

i. Subject scope

Earth science, remote sensing, etc.

ii. Industry scope

Geographical information services, remote sensing surveying and mapping services, etc.;

iii. Other classifications (optional)

III. Accuracy of dataset/atlas

i. Time frequency

Annual.

ii. Spatial reference, accuracy, and granularity

Spatial reference: GCS_WGS_1984;

Spatial resolution: 250 m.

IV. Dataset/atlas storage management

i. Data quantity

944 MB

ii. Type format

TIF

iii. Update management

Irregular updating

V. Quality control of the dataset/atlas

i. Production mode

The vegetation phenology dataset based on MOD13Q1 in Mongolia (2001-2019) was developed based on the data integration between the MOD13Q1 NDVI product with dynamic threshold method. The data processing environment mainly includes MODIS Reprojection Tool、TIMESAT and ArcGIS.

ii. Data sources (condition selection)

Terra/MODIS NDVI data product (MOD13Q1).

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

Acquisition method: Data sources from the National Aeronautics and Space Administration (LAADS DAAC) website (https://ngdc.noaa.gov/eog/viirs/download_ut_mos.html).The format is hdf, the spatial resolution is 250m, the whole of Mongolia.

Processing method: The vegetation phenology dataset based on MOD13Q1 in Mongolia (2001-2019) was developed based on the data integration between the MOD13Q1 NDVI product with dynamic threshold method on the TIMESAT platform. The day when the NDVI value reaches 50% of the amplitude of NDVI change in spring was determined as beginning of the growing season; when the NDVI value drops to 55% of the NDVI amplitude in autumn, the day was taken as end of the growing season.

VI. Sharing and usage method of the dataset/atlas

i. Sharing methods and restrictions

Fully opened sharing

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

Online link address:

Contact Information for Service：

Name: Service group of Disaster Risk Reduction Knowledge Service System of IKCEST

Address：11A, Datun Road, Chaoyang District, Beijing, 100101, China, Institute of Geographic Sciences and Natural Resources Research, CAS.

Zip Code：100101

E-mail: ikcest-drr@lreis.ac.cn

iii. Conditions and methods of usage

The dataset can be read by ArcGIS and ENVI 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

Vegetation Phenology Data Set of Mongolia from 2001 to 2019. Disaster Risk Reduction Knowledge Service of International Knowledge Centre for Engineering Sciences and Technology (IKCEST) under the Auspices of UNESCO, 2022.09.30.

iii. Usage contacts of the datasets/atlas

Name: Service group of Disaster Risk Reduction Knowledge Service System of IKCEST

Address：11A, Datun Road, Chaoyang District, Beijing, 100101, China, Institute of Geographic Sciences and Natural Resources Research, CAS.

Zip Code：100101

E-mail: ikcest-drr@lreis.ac.cn

VIII. Others (optional)

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

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