

Spatio-temporal Distribution of Desertification Disaster along the China-Mongolia railway (Mongolia section) in 2000 and 2015

Data Documentation

I. Dataset/atlas content features

i. Abstract

This dataset described the Spatio-temporal Distribution of Desertification Disaster along the China-Mongolia railway (Mongolia section) in 2000 and 2015, which mainly record the degree of desertification, and spatiotemporal distribution information. They were collected and organized by the Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences. This dataset was composed of 6 vector files and 4 grid files. It can be used in the study of desertification. And it can provide important basis for monitoring and prevention of desertification disaster.

ii. Elements (content fields)

This dataset was named as “Spatio-temporal Distribution of Desertification Disaster along the China-Mongolia railway (Mongolia section) in 2000 and 2015”, 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 |
|---------------------------|--------------|-----------------------|--------------------|------------------------|---------|
| Desertification intensity | degree | 等级 | | | |

iii. Temporal cover

2000 and 2015.

iv. Spatial cover

Along the China-Mongolia railway (Mongolia section).

II. Subject/industry scope of dataset/atlas

i. Subject scope

Basic Disaster information

ii. Industry scope

Environmental and Textile

iii. Other classifications (optional)

III. Accuracy of dataset/atlas

i. Time frequency

Yearly

ii. Spatial reference, accuracy, and granularity

This dataset used the WGS1984 coordinate system. The spatial resolution is 30 meters.

IV. Dataset/atlas storage management

i. Data quantity

The volume of the dataset is 4.16 GB.

ii. Type format

This dataset was stored in hard disk with formats of “.shp” and “.tif”.

iii. Update management

Unscheduled update.

V. Quality control of the dataset/atlas

i. Production mode

Based on ArcGIS software, the desertification disaster monitoring area was established by extending the China-Mongolia railway (Mongolia section) to a range of 200km on both sides of the railway. Then, based on the Landsat series remote sensing image data downloaded from the USGS website in 2000 and 2015 along the China-Mongolia railway (Mongolia section), ENVI software was used to conduct quantitative inversion of NDVI, MSAVI, TGSI, Albedo and FVC. According to the characteristics of vegetation cover in different regions along the China-Mongolia railway (Mongolian section), three feature space models of Albedo-NDVI, Albedo-MSAVI and Albedo-TGSI were constructed respectively to extract desertification information along the railway (Mongolian section). In this way, the desertification degree along the China-Mongolia railway (Mongolia section) can be classified, and the desertification status charts of the railway (Mongolia section) in 2000 and 2015 can be obtained.

ii. Data sources (condition selection)

The original data was from the USGS official website.

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)

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

This dataset can be opened using ArcGIS.

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

Spatio-temporal Distribution of Desertification Disaster along the China-Mongolia railway (Mongolia section) in 2000 and 2015. Disaster Risk Reduction Knowledge Service of International Knowledge Centre for Engineering Sciences and Technology (IKCEST) under the Auspices of UNESCO, 2019.9.17.

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

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VIII. Others (optional)

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

| Data documentation author information | | | |
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