

Data set of 30-meter land cover distribution in the China-Pakistan transportation corridor, 2008-2021

Data Documentation

I. Dataset/atlas content features

i. Abstract

This dataset is a 30-meter land cover distribution dataset for the China-Pakistan transportation corridor from 2008 to 2021, with 14 issues. The data were obtained from Landsat 8/5 image data through data pre-processing, sample selection, feature parameter adjustment, and application of random forest classification method based on Google Earth Engine platform. The data format is TIF format, the spatial resolution is 30 meters, and the overall accuracy of the data reaches more than 85%. This dataset provides the background data for the study of China-Pakistan transportation corridor and can be used as the basis for other studies.

ii. Elements (content fields)

The data is named "YYYY.tif", YYYY represents the year range 2008-2021, the data product raster value range is {0,10}, and the specific land type represented is as follows.

Label	Class
0	No data
1	Cropland
2	Forest
3	Grassland
4	Tundra
5	Barren land
6	Snow/ice
7	Water
10	Construction

iii. Temporal cover

2008 - 2021

iv. Spatial cover

40° 46' 13.75" N-32° 59' 20.79" N, 71° 14' 9.81" E-78° 36' 37.1" 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: 30 m.

IV. Dataset/atlas storage management

i. Data quantity

571MB

ii. Type format

TIF

iii. Update management

Irregular updating

V. Quality control of the dataset/atlas

i. Production mode

Using Landsat 8/5 image data and DEM, NDVI, NDWI, EVI and other feature bands, a 30-meter surface water distribution dataset of the China-Pakistan traffic corridor was obtained by deep learning model training and using RF classifier in GEE platform. The data processing environment mainly includes ArcGIS, Google Earth Engine.

ii. Data sources (condition selection)

Landsat 8 OLI/Landat5TM imagery and NASA DEM data

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

GEE was used to obtain the reflectance data of Landsat 8/5 surface observation images from June to September, combined with digital elevation model, water feature band, soil feature band, etc. The RF classifier was used to classify the China-Pakistan traffic corridor, and it was classified into 8 categories of arable land, agricultural land, construction land, snow and ice, grassland, forest, and tundra bare land with the support of GEE cloud platform according to the characteristics of local land types and international classification standards.

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)

2008-2021 China-Pakistan Transportation Corridor 30m Land Cover Distribution Dataset Copyrighted to Institute of Geographical Sciences and Resources, Chinese Academy of Sciences .

ii. Reference method of the dataset/atlas

Data set of 30-meter land cover distribution in the China-Pakistan transportation corridor from 2008-2021. Disaster Risk Reduction Knowledge Service of International Knowledge Centre for Engineering Sciences and Technology (IKCEST) under the Auspices of UNESCO, 2022.12

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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