Soil degradation data set with 30 m spatial resolution in the Yellow River Delta

Data Documentation

I. Dataset/atlas content features

i. Abstract

Based on landsat8 oil multispectral data with 30 meters spatial resolution in 2015 and 2019, the data set of soil degradation degree in the Yellow River Delta was evaluated by combining the feature space method.

The data set shows the degree of soil degradation in the Yellow River Delta region, helps users understand the spatial and temporal distribution of soil degradation degree in the region, and provides reference and basis for users and further research.

ii. Elements (content fields)

Table 1 Description of data element content

Data name	Item (field)	Field name in Chinese	Field measure unit	Field code description	Remarks
soil degradation	Value	土壤退化		Degree of soil degradation	

iii. Temporal cover

2015-2019

iv. Spatial cover

Yellow River Delta

II. Subject/industry scope of dataset/atlas

i. Subject scope

Earth science

ii. Industry scope

Soil degradation

iii. Other classifications (optional)

III. Accuracy of dataset/atlas

i. Time frequency

5 years

ii. Spatial reference, accuracy, and granularity

Spatial reference: GCS_WGS_1984

Accuracy: 1 time

Spatial resolution: 30m

Granularity: station

IV. Dataset/atlas storage management

i. Data quantity

156 MB

ii. Type format

The data set is stored on hard disk, and the data structure type is raster data.

iii. Update management

Irregular updates

V. Quality control of the dataset/atlas

i. Production mode

Based on landsat8 oil multispectral data with 30 meters spatial resolution in 2015 and 2019, the data set of soil degradation degree in the Yellow River Delta was evaluated by combining the feature space method.

ii. Data sources (condition selection)

Landsat8 oil multispectral images with 30 m spatial resolution in 2015 and 2019

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

Based on multispectral data, three spatial inversion models of soil degradation characteristics, namely albedo MSAVI, Si albedo and si-ndvi, were constructed. The results showed that the inversion effect of Si albedo model was the best in this region, and the soil degradation data with 30 m resolution in 2015 and 2019 were produced by using the model.

VI. Sharing and usage method of the dataset/atlas

i. Sharing methods and restrictions

Fully shared

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

The service is as follows:

Name: Bian lingling

Mailing address: A11 Datun Road, Chaoyang District, Beijing

Zip code: 100101

E-mail：1437008569@qq.com

iii. Conditions and methods of usage

Use ArcGIS, ENVI and other software to open.

VII. Intellectual property rights of the dataset/atlas

i. Property rights (optional)

The property right of "soil degradation data set with 30 meters spatial resolution in the Yellow River Delta" belongs to the Institute of Geographic Sciences and resources, Chinese Academy of Sciences.

ii. Reference method of the dataset/atlas

Soil degradation data set with 30 m spatial resolution in the Yellow River Delta. Disaster Risk Reduction Knowledge Service of International Knowledge Centre for Engineering Sciences and Technology (IKCEST) under the Auspices of UNESCO, 2020.12.14. URL

iii. Usage contacts of the datasets/atlas

Contact person

Name: Bian lingling

Mailing address: A11 Datun Road, Chaoyang District, Beijing

Zip code: 100101

E-mail：1437008569@qq.com

VIII. Others (optional)

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

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