The Assessment of Damaged Vgetation Caused by Ice-snow Disaster

Data Documentation

I. Dataset/atlas content features

i. Abstract

The damaged degree of forest ice-snow frozen disaster contributes to reduce the loss of forest resources and forest ecosystem management, which is of great significance to the restoration of forest vegetation. This datasets are divided into two parts: the spatial distribution of damaged vegetation and evaluation on forest losses. Based on the dynamic threshold method, NDVI data is selected to extract the damaged forest caused by ice-snow disaster in 2008 and assess the forest losses. This datasets can be used to post-disaster various researches.

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
NDVI01_anhui			non	-3:non forest; -2:invalid value; -1:damaged forest; 0:undamaged forest;	
NDVI01_chongqing			Non	-3:non forest; -2:invalid value; -1:damaged forest; 0:undamaged forest;	
NDVI01_fujian			Non	-3:non forest; -2:invalid value; -1:damaged forest; 0:undamaged forest;	
NDVI01_guangdong			Non	-3:non forest; -2:invalid value; -1:damaged	

				forest; 0:undamaged forest;	
NDVI01_guangxi			Non	-3:non forest; -2:invalid value; -1:damaged forest; 0:undamaged forest;	
NDVI01_guizhou			Non	-3:non forest; -2:invalid value; -1:damaged forest; 0:undamaged forest;	
NDVI01_hubei			Non	-3:non forest; -2:invalid value; -1:damaged forest; 0:undamaged forest;	
NDVI01_hunan			Non	-3:non forest; -2:invalid value; -1:damaged forest; 0:undamaged forest;	
NDVI01_jiangxi			Non	-3:non forest; -2:invalid value; -1:damaged forest; 0:undamaged forest;	

NDVI01_zhejiang			Non	-3:non forest; -2:invalid value; -1:damaged forest; 0:undamaged forest;	
anhui			Non	-3:non forest; -2:invalid value; -1:damaged forest; 0:undamaged forest;	
chongqing			Non	-3:non forest; -2:invalid value; -1:damaged forest; 0:undamaged forest;	
fujian			Non	-3:non forest; -2:invalid value; -1:damaged forest; 0:undamaged forest;	
guangdong			Non	-3:non forest; -2:invalid value; -1:damaged forest; 0:undamaged forest;	
guangxi			Non	-3:non forest; -2:invalid value;	

				-1:damaged forest; 0:undamaged forest;	
guizhou			Non	-3:non forest; -2:invalid value; -1:damaged forest; 0:undamaged forest;	
hubei			Non	-3:non forest; -2:invalid value; -1:damaged forest; 0:undamaged forest;	
hunan			Non	-3:non forest; -2:invalid value; -1:damaged forest; 0:undamaged forest;	
jiangxi			Non	-3:non forest; -2:invalid value; -1:damaged forest; 0:undamaged forest;	
zhejiang			non	-3:non forest; -2:invalid value; -1:damaged forest; 0:undamaged forest;	

iii. Temporal cover

The dataset coverage is 2008/01/10 to 2008/02/02.

iv. Spatial cover

The dataset covers Anhui, Chongqing, Fujian, Guangdong, Guangxi, Guizhou, Hubei, Hunan, Jiangxi and Zhejiang Province.

II. Subject/industry scope of dataset/atlas

i. Subject scope

Earth Science

ii. Industry scope

Natural science research and experiment development

iii. Other classifications (optional)

(Other categories can be applied, but should reflect the dataset/atlas characteristics.)

III. Accuracy of dataset/atlas

i. Time frequency

The dataset is produced for the southern snowstorm disaster in early 2008, the specific time of which is from 2008/01/10 to 2008/02/02.

ii. Spatial reference, accuracy, and granularity

The spatial reference is Albers Equal Area Conic; spatial resolution is 250m; province;

IV. Dataset/atlas storage management

i. Data quantity

The data quantity is 911 MB.

ii. Type format

The dataset is stored as a hard disk, and the data structure type is a raster TIF file.

iii. Update management

No update plan

V. Quality control of the dataset/atlas

i. Production mode

The vegetation index product (MOD13Q1) is downloaded from MODIS official website. The spatial distribution of damaged forest affected by ice-snow disaster is obtained, and based on this, we use dynamic threshold method to assess forest resource loss in this ice-snow disaster.

ii. Data sources (condition selection)

MOD13Q1 sources from MODIS website;

Forest distribution map sources from National earth system science data sharing infrastructure.

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

We extract NDVI data from the MOD13Q1 dataset and select the dynamic threshold method to diagnose whether the vegetation is damaged or not in suitable period, which refers to the time after ice-snow melting. The diagnosed result is superimposed with the forest map to get the spatial distribution information of damaged forest vegetation caused by ice-snow disaster.

VI. Sharing and usage method of the dataset/atlas

i. Sharing methods and restrictions

Temporarily not shared before 2017/12/31, fully shared after 2017/12/31

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

The service is as follows:

Name: Wang xuecheng

Mailing address: Chaoyang District, Beijing Datun Road on the 11th
Zip code: 100101
E-mail：wangxc.15s@igsnrr.ac.cn

iii. Conditions and methods of usage

(The environmental conditions when to use the datasets/atlas should be provided, including the necessary software tools, hardware requirements, and operation of the steps, methods, or precautions.)

VII. Intellectual property rights of the dataset/atlas

i. Property rights (optional)

"The assessment of damaged vegetation caused by ice-snow disaster" owned by institute of geographic sciences and natural resources research, CAS.

ii. Reference method of the dataset/atlas

Wang X C,Yang F, Gao X, et al. 2017. Precise extraction of damaged forest range caused by ice-snow frozen disaster based on the NDVI threshold method. Journal of Geo-information Science, 19(4):549-558. DOI:10.3724/SP.J.1047.2017.00549

iii. Usage contacts of the datasets/atlas

Contact person
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VIII. Others (optional)

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

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