A Big Earth Data Platform for Three Poles

**Post-processing products of the Circumpolar Arctic and Tibetan Plateau Vegetation Correction Index 2013 and 2018**

1、Description

NDVI reflects the background effects of plant canopy, such as soil, wet ground, snow, dead leaves, roughness, etc., and is related to vegetation cover. It is one of the important parameters to reflect the crop growth and nutrient information. According to this parameter, the N demand of crops in different seasons can be known, which is an important guide to the reasonable application of N fertilizer. Correct NDVI (C-NDVI) is the value of NDVI after excluding the influence of climate elements (temperature, precipitation, etc.) on NDVI. Taking precipitation as an example, studies on the lag effect of precipitation on vegetation growth show that the lag time of precipitation effects varies in different regions due to differences in vegetation composition and soil types. In this study, we post-processed the MODIS NDVI data and firstly correlated the NDVI value of the current month with the precipitation of the current month, the average value of the precipitation of the current month with that of the previous month, and the average value of the precipitation of the current month with that of the previous two months to determine the optimal lag time. The NDVI was regressed on precipitation and air temperature to obtain the correlation coefficients, and then the corrected NDVI values were calculated by the difference between the MODIS NDVI and the NDVI regressed on climate factors. We corrected NDVI using climate data to give reliable vegetation correction indices for the circum-Arctic Circle (range north of 66°N) and the Tibetan Plateau (range 26°N to 39.85°N and 73.45°E to 104.65°E) for 2013 and 2018. The spatial resolution of the data is 0.5 degrees and the temporal resolution is monthly values.

2、Keywords

Theme：Others,vegetation optical depth,NDVI,Terrestrial Surface Remote Sensing  
Discipline：Terrestrial Surface,Remote Sensing Technology  
Places：Tibetan Plateau, Circum-Arctic  
Time：2013, 2018

3、Data details

1.Scale：None

2.Projection：WGS84

3.Filesize：813.0MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：90.0 | - |
| west：180.0 | - | east：180.0 |
| - | south：66.0 | - |

5、Time frame:2013-05-31 16:00:00+00:00--2018-08-30 16:00:00+00:00

6、Reference method

References to data:

YE Aizhong. Post-processing products of the Circumpolar Arctic and Tibetan Plateau Vegetation Correction Index 2013 and 2018. A Big Earth Data Platform for Three Poles, doi:10.11888/Terre.tpdc.2727352022

References to articles:

7、Supporting project information

CASEarth:Big Earth Data for Three Poles（grant No. XDA19070000）

8、Data resource provider

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