A Big Earth Data Platform for Three Poles

**Dataset of agricultural water resources vulnerability in Central Asia (V1.0)**

1、Description

In order to investigate the variation characteristics of agricultural water resources vulnerability in Central Asia, an index system was established with 18 indicators from three components, namely exposure, sensitivity and adaptation, according to the scheme of vulnerability assessment. Based on the socio-economic, topography, land cover and soil data, agricultural water resources vulnerability were calculated using the Equal-Weights and Principal Component Analysis (PCA) method. Each original raster data is resampled, starting from the upper-left corner of the original grid, and extending to the adjacent right and lower grids in turn, and every four grids (0.5 °) are merged into one grid, taking the median data as the center point value corresponding to four grid of geographic coordinates. The extreme values of the grids could be eliminated. The data sets includes 1992-1996, 1997-2001, 2002-2006, 2007-2011, 2012-2017and 1992-2017with a spatial resolution of 0.5°\*0.5°. It is expected to provide basic data support for agricultural water supply and demand, development and utilization analysis in five central Asian countries.

2、Keywords

Theme：Surface Water,Recharge  
Discipline：Terrestrial Surface  
Places：Pan-third pole  
Time：1992-2017

3、Data details

1.Scale：None

2.Projection：

3.Filesize：0.065MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：56.0 | - |
| west：46.0 | - | east：88.0 |
| - | south：35.0 | - |

5、Time frame:1991-12-31 16:00:00+00:00--2017-12-30 16:00:00+00:00

6、Reference method

References to data:

LI Lanhai, YU Shui. Dataset of agricultural water resources vulnerability in Central Asia (V1.0). A Big Earth Data Platform for Three Poles, doi:10.11888/Hydro.tpdc.2715392020

References to articles:

于水, 黄法融, 李兰海. (2021). 中亚农业水资源脆弱性及其变化特征分析. 中国生态农业学报(中英文), 29(02), 256-268.

7、Supporting project information

Pan-Third Pole Environment Study for a Green Silk Road-A CAS Strategic Priority A Program

8、Data resource provider

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