A Big Earth Data Platform for Three Poles

**Dataset for evaluation of cropland development potential in five Central Asian countries (V1.0, 2020-2060)**

1、Description

The evaluation of the potential of cropland development under the influence of future climate change changes was carried out for the sustainable development of agriculture in five Central Asian countries, with cropland as the target. The evaluation factors of cropland development potential include: topographic factors (elevation, slope, slope direction, distance to water resources), soil factors (salinity, soil texture, soil organic matter content, soil pH), climate factors (rainfall, temperature, solar radiation), and economic factors (road density, population density). Using 2020 as the base year, the future potential for cropland development in Central Asia under the SSP5-8.5 scenario was estimated using the average precipitation and temperature from the ESM1 climate model in CMIP6, with other indicators held constant. The data provide evaluation results of the cropland development potential of the five Central Asian countries for the time periods 2020s, 2030s (2021-2040) and 2050s (2041-2060) with a spatial resolution of 0.01° × 0.01°. The dataset can provide basic data support for future land resource development and utilization and agricultural development in the five Central Asian countries.

2、Keywords

Theme：Development potential,Agricultural Resources,Land Resources  
Discipline：Human-nature Relationship  
Places：Central Asia  
Time：2020-2060

3、Data details

1.Scale：None

2.Projection：

3.Filesize：168.0MB

4.Data format：None

4、Space scope

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

5、Time frame:2019-12-31 16:00:00+00:00--2060-12-30 16:00:00+00:00

6、Reference method

References to data:

JIANG Xiaohui, ZHANG Junjun . Dataset for evaluation of cropland development potential in five Central Asian countries (V1.0, 2020-2060). A Big Earth Data Platform for Three Poles, doi:10.11888/HumanNat.tpdc.2726792022

References to articles:

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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