A Big Earth Data Platform for Three Poles

**Global Climate-Ecological Pattern Evolution Product Dataset (1981-2100)**

1、Description

(1) Data content: The evolution product of the global climate-ecological pattern. The time range includes the historical period 1981-2020 with a spatial resolution of 0.5°, and the future period 2021-2100 (the future period contains four different shared socioeconomic pathways: SSP126, SSP245, SSP370, SSP585), with a spatial resolution of 1°, every 20 years 1 issue.
(2) Data source and processing method: The leaf area index data of GLOBMAP was selected as the basis in the historical period, and the leaf area index data of three CMIP6 models (ACCESS-ESM1-5, CanESM5, UKESM1-0-LL) were integrated in the future period. The relationship between temperature, precipitation and radiation and the leaf area index was constructed through multiple linear regression, and the corresponding coefficients were extracted to characterize the influence of each climate variable on the leaf area index. Finally, the RGB map was used to characterize the climatic factors of the leaf area index. Influence coefficient.
(3) Data quality description: Global 20-year period 1, historical period 2 period (1981-2000; 2001-2020), the future period includes four shared socio-economic paths (SSP126, SSP245, SSP370, SSP585), each path The next 4 issues (2021-2040; 2041-2060; 2061-2080; 2081-2100).
(4) Data application achievements and prospects: This data can be used for studies related to the evolution of vegetation and ecosystems in the context of climate change.

2、Keywords

Theme：Vegetation,Climate change,Leaf area index(LAI),Terrestrial Surface Remote Sensing
Discipline：Terrestrial Surface
Places：Global
Time：2021-2100, 1981-2020

3、Data details

1.Scale：None

2.Projection：

3.Filesize：25.3MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：84.75 | - |
| west：-179.75 | - | east：179.75 |
| - | south：-59.75 | - |

5、Time frame:1980-12-31 16:00:00+00:00--2100-12-30 16:00:00+00:00

6、Reference method

References to data:

HE Bin. Global Climate-Ecological Pattern Evolution Product Dataset (1981-2100). A Big Earth Data Platform for Three Poles, doi:10.11888/Terre.tpdc.2727622022

References to articles:

7、Supporting project information

Interaction and regional performance of natural and human factors on land surface driven by global change

8、Data resource provider

name: HE Bin
unit:
email: Hebin@bnu.edu.cn