A Big Earth Data Platform for Three Poles

**The contributions of climate change and human activities on vegetation carbon sequestration in China during 2001~2018**

1、Description

This dataset contains the monthly/yearly surface shortwave band albedo, fraction of absorbed photosynthetically active radiation (fPAR), leaf area index (LAI), vegetation continuous fields (tree cover and non-tree vegetation cover, VCF), land surface temperature (LST), net radiation (RN), evapotranspiration (ET), aboveground autotrophic respiration (RA-ag), belowground autotrophic respiration (RA-bg), gross primary production (GPP) and net primary production (NPP) in China from 2001 to 2018. The spatial resolution are 0.1 degree. Moreover, the dataset also includes these 11 ecosystem variables under climate-driven scenario (i.e., under no human disturbance). So, it can show the relative influences of climate change and human activities on land ecosystem in China during the 21st century.

2、Keywords

Theme：Land-surface evapotranspiration,Leaf area index,Vegetation,Climate change,Ecological engineering,Gross primary product,Forest coverage,Atmosphere Remote Sensing,land surface temperature,Terrestrial Surface Remote Sensing
Discipline：Atmosphere,Terrestrial Surface
Places：China
Time：21st century, 2001-2018

3、Data details

1.Scale：None

2.Projection：WGS84

3.Filesize：6312.0MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：54.0 | - |
| west：73.5 | - | east：135.0 |
| - | south：18.0 | - |

5、Time frame:2000-12-31 16:00:00+00:00--2018-12-30 16:00:00+00:00

6、Reference method

References to data:

PIAO Shilong, FENG Xiaoming, FENG Yu, TIAN Hanqin, WU Xutong, CHEN Yongzhe, PAN Naiqing, GAO Zhen, LV Nan, FU Bojie. The contributions of climate change and human activities on vegetation carbon sequestration in China during 2001~2018. A Big Earth Data Platform for Three Poles, doi:10.11888/Ecolo.tpdc.2716672021

References to articles:

Chen, Y., Feng, X., Tian, H., Wu, X., Gao, Z., Feng, Y., Piao, S., Lv, N., Pan, N., & Fu, B. (2021). Accelerated increase in vegetation carbon sequestration in China after 2010: A turning point resulting from climate and human interaction. Global Change Biology, 00, 1– 17. https://doi.org/10.1111/gcb.15854

7、Supporting project information

8、Data resource provider

name: CHEN Yongzhe
unit:
email: yongzhechen@126.com

name: FENG Xiaoming
unit:
email: fengxm@rcees.ac.cn

name: TIAN Hanqin
unit:
email: tianhan@auburn.edu

name: WU Xutong
unit:
email: wuxutong1994@163.com

name: GAO Zhen
unit:
email: zhengaochina@gmail.com

name: FENG Yu
unit:
email: fengyuwind@163.com

name: PIAO Shilong
unit:
email: slpiao@pku.edu.cn

name: LV Nan
unit:
email: nanlv@rcees.ac.cn

name: PAN Naiqing
unit:
email: nzp0030@auburn.edu

name: FU Bojie
unit:
email: bfu@rcees.ac.cn