A Big Earth Data Platform for Three Poles

**Grassland actual net primary production, potential net primary production and potential aboveground biomass on the Tibetan Plateau from 2000 to 2017**

1、Description

Grassland actual net primary production (NPPa) was calculated by CASA model. CASA model was calculated with the combination of satellite-observed NDVI and climate (e.g. temperature, precipitation and radiation) as the driving factors, and other factors, such as land-use change and human harvest from plant material, were reflected by the changes of NDVI. CASA NPP was determined by two variables, absorbed photosynthetically active radiation’ (APAR) and the light-use efficiency (LUE). Grassland potential net primary production (NPPp) was calculated by TEM model. TEM is one of process-based ecosystem model, which was driven by spatially referenced information on vegetation type, climate, elevation, soils, and water availability to calculate the monthly carbon and nitrogen fluxes and pool sizes of terrestrial ecosystems. TEM can be only applied in mature and undisturbed ecosystem without take the effects of land use into consideration due to it was used to make equilibrium predications. Grassland potential aboveground biomass (AGBp) was estimated by random forest (RF) algorithm, using 345 AGB observation data in fenced grasslands and their corresponding climate data, soil data, and topographical data.

2、Keywords

Theme：Social and Economic,Gross Primary Productivity  
Discipline：Human-nature Relationship  
Places：Tibet Plateau  
Time：2000-2018

3、Data details

1.Scale：None

2.Projection：

3.Filesize：234.0MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：39.0 | - |
| west：73.0 | - | east：104.0 |
| - | south：26.0 | - |

5、Time frame:1999-12-31 16:00:00+00:00--2018-12-30 16:00:00+00:00

6、Reference method

References to data:

ZHANG Xianzhou, NIU Ben. Grassland actual net primary production, potential net primary production and potential aboveground biomass on the Tibetan Plateau from 2000 to 2017. A Big Earth Data Platform for Three Poles, doi:10.11888/Ecolo.tpdc.2712042021

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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