A Big Earth Data Platform for Three Poles

**Dataset of vegetation regulation mechanism of soil water cycle in arid desert area (2002-2005)**

1、Description

The vegetation regulation mechanism project of soil water cycle in arid desert areas belongs to the national natural science foundation "environment and ecological science in western China" major research plan, led by li xinrong, a researcher of the institute of environment and engineering in dry and cold areas, Chinese academy of sciences, with the running time of 2003.1-2005.12.  
Remittance data of the project:  
1. Dataset of observation field of shapotou railway vegetation sand fixation protection system (excel)  
Plant and soil information in the vegetation-sand fixation zone established in 1956, 1964, 1981 and 1987.Since the establishment of the observation field, long-term soil moisture and vegetation surveys have been conducted. This database records the soil moisture data after the neutron tube installation in August 2002, the vegetation data from 2003 to 2005 (vegetation structure, herb structure, shrub structure, etc.), and the soil physical and chemical properties data (particle size, total N,P2O5,K2O, hydrolyzed N) of the irregular surveys.   
2. Physiological data set of desert plant stress (excel)  
From 2003 to 2005, the physiological and biochemical characteristics of typical plant communities and their dominant species in steppe desert under natural and simulated environmental conditions were analyzed.(including photosynthetic transpiration, fluorescence, biochemistry and other indicators)  
3. Soil infiltration and evapotranspiration data set (excel)  
Precipitation infiltration process, soil water dynamics and evapotranspiration of fixed sand dunes monitored by desert artificial vegetation using TDR and Lysimeters from 2002 to 2005.   
4. Data set of comprehensive survey on soil and vegetation in the southeastern margin of tengger desert (excel)  
In 2003-2004, silver (sichuan), yan (latour) highway, silver (sichuan) (state) highway through the tengger desert area, set up along the road of eight samples, 449 samples of soil conductivity, Ph, organic matter, total nitrogen (content) and vegetation (plants, coverage, average height, biomass, strains, coverage, high average, biomass).

2、Keywords

Theme：Soil,Photosynthetically active radiation,Desert,Vegetation,Organic matter,Evapotranspiration,Soil infiltration,Desert ecosystem,Soil moisture/Water content,Vegetation structure  
Discipline：Terrestrial Surface  
Places：Tengger Desert, Shapotou  
Time：2002-2005

3、Data details

1.Scale：None

2.Projection：None

3.Filesize：8.76MB

4.Data format：文本

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：39.48 | - |
| west：104.41 | - | east：107.7 |
| - | south：35.2 | - |

5、Time frame:2002-01-05 08:00:00+00:00--2006-01-04 19:59:59+00:00

6、Reference method

References to data:

LI Xinrong. Dataset of vegetation regulation mechanism of soil water cycle in arid desert area (2002-2005). A Big Earth Data Platform for Three Poles, doi:10.11888/Soil.tpdc.2706032014

References to articles:

李新荣. (2005). 干旱沙区土壤空间异质性变化对植被恢复的影响. 中国科学（地球科学）, 035(004), 361-370.

7、Supporting project information

8、Data resource provider

name: LI Xinrong  
unit:   
email: lxinrong@lzb.ac.cn