A Big Earth Data Platform for Three Poles

**Land cover future scenario data of Heihe River Basin (2040, 2070, 2011)**

1、Description

This dataset provides the estimated results of land cover change (IGBP classification) in 2040, 2070 and 2100 of Heihe River under the latest cmip5 based greenhouse gas emission scenario RCPs (representative concentration pathways). Spatial resolution: 1km. Time period: RCP (2.6, 4.5, 8.5) three scenarios, each scenario corresponding to three time periods: t1:2040, t2:2070, t3:2100.

File naming rules: take "HLCs rcp26\_" as an example to explain: in the naming, "HLCs" refers to the land cover scenario of Heihe River Basin, rcp26 refers to the rcp2.6 scenario of cmip5, "\_40" refers to the future scenario period of 2040, the complete file name means the land cover prediction data of Heihe River Basin in 2040 under the rcp26 scenario, and so on.

2、Keywords

Theme：land cover,Land Resources
Discipline：Human-nature Relationship
Places：Heihe River Basin
Time：

3、Data details

1.Scale：10000

2.Projection：4326

3.Filesize：5.0MB

4.Data format：EXCEL

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：42.0 | - |
| west：98.0 | - | east：101.0 |
| - | south：38.0 | - |

5、Time frame:2040-07-11 07:56:00+00:00--2101-07-10 16:00:00+00:00

6、Reference method

References to data:

YUE Tianxiang, FAN Zemeng. Land cover future scenario data of Heihe River Basin (2040, 2070, 2011). A Big Earth Data Platform for Three Poles, doi:10.11888/Socioeco.tpdc.2708722016

References to articles:

TianXiang Yue. 2011. Surface Modelling: High Accuracy and High Speed Methods. New York: CRC Press (Taylor & Francis group)

Zemeng Fan, Jing Li, Tianxiang Yue, Xun Zhou, Anjun Lan, 2015. Scenarios of land cover in Karst area of Southwestern China. Environmental Earth Sciences, 74:6407–6420.

Yue Tian-Xiang. Surface Modelling: High Accuracy and High Speed Methods. CRC Press: New York.

李婧，范泽孟，岳天祥． 中国西南地区土地覆盖情景的时空模拟． 生态学报，2014，34( 12) : 3266-3275．[Li J，Fan Z M Yue T X． Spatio-temporal simulation of land cover

scenarios in southwestern of China． Acta Ecologica Sinica，2014，34( 12) : 3266-3275．]

Ze-Meng Fan , Jing Li, Tian-Xiang Yue, 2013. Land-cover changes of biome transition zones in Loess Plateau of China. Ecological Modelling, 252, 129-140.

范泽孟, 李婧，岳天祥，黄土高原生态系统过渡带土地覆盖的时空变化分析. 自然资源学报, 2013, 28(3): 426-435[Fan Zemeng, Lijing, Yue Tianxiang. Spatial-temporal change of land cover in Ecosystem transitional zones on the Loess Plateau of China. Journal of Natural Resources. 2013, 28(3): 426-435]

Fan, Z. M. , Bai, R. Y. , Yue, T. X. (2020). Scenarios of land cover in Eurasia under climate change. Journal of Geographical Sciences, 30(1): 3-17.

周勋, 范泽孟, 岳天祥, (2017). 黑河流域植被类型分布模拟分析. 地球信息科学学报, 19(4):493-501.

Yue, T. X. , Fan, Z. M. , Liu, J. Y. (2007). Scenarios of Land cover in China. Global and Planetary Change, 55: 317-342.

7、Supporting project information

8、Data resource provider

name: YUE Tianxiang
unit: Institute of Geographic Sciences and Natural Resources Research,Chinese Academy of Sciences
email: yue@lreis.ac.cn

name: FAN Zemeng
unit:
email: fanzm@lreis.ac.cn