A Big Earth Data Platform for Three Poles

**Datasets of streamflow, evapotranspiration and precipitation in the Upper Heihe River Basin (1992-2015)**

1、Description

This data is the runoff and evapotranspiration generated by the precipitation in the growing season of the upper reaches of Heihe River from 1992 to 2015. Temporal resolution: year (growingseason), spatial resolution: 0.00833°. The data include precipitation (mm), evapotranspiration (mm), runoff (mm) and soil water content (m3 / m3). The data are obtained by using meteorological, soil and vegetation parameters based on Eagleson eco hydrological model. The simulated rainfall runoff is verified by using the observed runoff data in the growing season of 6 sub basins in the upper reaches of Heihe River (Heihe main stream, Babao River, yeniugou, Liyuan River, Wafangcheng and Hongshui River). The variation range of correlation coefficient (R) is 0.53-0.74, RMSE is 32.46-233.18 mm, and the relative error range is -0.66-0.0005; The difference between simulated evapotranspiration and gleam et is − 115.36 mm to 44.1 mm. The simulation results can provide some reference for hydrological simulation in the upper reaches of Heihe River.

2、Keywords

Theme：climate change adaptation,Evapotranspiration,Surface Water,Ecological governance,Others,Streamflow,rainfall,Hydrology,Eagleson’s Ecohydrological Model,evapotranspiration,Runoff
Discipline：Terrestrial Surface,Others
Places：Upper Heihe River Basin
Time：1992-2015

3、Data details

1.Scale：None

2.Projection：

3.Filesize：154.0MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：40.0125 | - |
| west：97.1125 | - | east：102.0125 |
| - | south：37.0375 | - |

5、Time frame:1991-12-31 16:00:00+00:00--2015-11-30 16:00:00+00:00

6、Reference method

References to data:

ZHANG Baoqing. Datasets of streamflow, evapotranspiration and precipitation in the Upper Heihe River Basin (1992-2015). A Big Earth Data Platform for Three Poles, doi:10.11888/Terre.tpdc.2724042022

References to articles:

Su, T., Zhang, B., He, X., Shao, R., Li, Y., & Tian, J., et al. (2020). Rational planning of land use can maintain water yield without damaging ecological stability in upstream of inland river: Case study in the Hei River Basin of China. Journal of Geophysical Research: Atmospheres, 125, e2020JD032727. https://doi.org/10.1029/2020JD032727

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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