A Big Earth Data Platform for Three Poles

**1 km resolution water conservation data set of Qinghai Tibet Plateau (2000-2020)**

1、Description

Water conservation service is an important ecosystem service, which directly affects the overall level of regional water resources and has an important impact on regional ecosystem, agriculture, industry, human consumption, hydropower, fishery and recreational activities. It is of great significance to maintain ecosystem stability and improve human well-being. Aiming at the production of water conservation products, based on the principle of water balance, coupled with the data of rainfall, evapotranspiration, solar radiation, temperature and vegetation type, the modeling of water conservation of ecosystem in national barrier area is studied. The water conservation service is calculated by the invest model based on the principle of water balance. The invest model has the advantages of less input data, large amount of export data and quantitative analysis of abstract ecosystem service functions. It is an important means of water conservation service evaluation at present. This method considers that the water conservation service is precipitation minus evapotranspiration, and the calculated indexes include annual precipitation and annual evapotranspiration. The precipitation data is based on the meteorological station data, the daily meteorological data is accumulated to the annual scale, and then interpolated to the space by ArcGIS spatial interpolation method; The calculation of evapotranspiration is realized by Zhang model. Taking multi-source data as the input variable of the invest model, the estimation of water conservation services in the Qinghai Tibet Plateau with a resolution of 1km from 2000 to 2020 is realized based on the parametric model.

2、Keywords

Theme：Surface Water,Water yield
Discipline：Terrestrial Surface
Places：Qinghai-Tibet Plateau
Time：2000-2020

3、Data details

1.Scale：None

2.Projection：Albers

3.Filesize：52.0MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：39.78 | - |
| west：73.48 | - | east：104.63 |
| - | south：25.99 | - |

5、Time frame:None--None

6、Reference method

References to data:

WANG Xiaofeng. 1 km resolution water conservation data set of Qinghai Tibet Plateau (2000-2020). A Big Earth Data Platform for Three Poles, doi:10.11888/Terre.tpdc.2723412022

References to articles:

Feng, X.M., Sun, G., Fu, B.J., Su, C.H., Liu, Y., & Lamparski, H. (2012). Regional effects of vegetation restoration on water yield across the Loess Plateau, China. Hydrol. Earth Syst. Sci., 16(8), 2617-2628. doi:10.5194/hess-16-2617-2012

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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