A Big Earth Data Platform for Three Poles

**Monthly evapotranspiration dataset with 30m spatial resolution over oasis in the middle reaches of the Heihe River Basin Version 1.0 (2000-2013)**

1、Description

ET（Evapotranspiration）monitoring is essential for agricultural water management, regional water resources utilization planning, and socio-economic sustainable development.The limitations of the traditional monitoring ET method are mainly that large-area simultaneous observations cannot be made and can only be limited to observation points. Therefore, the cost of personnel and equipment is relatively high, and it is unable to provide ET data on the surface, nor to provide the ET data of different land use types and crop types.
Quantitative monitoring of ET can be achieved by remote sensing. The characteristics of remote sensing information are that it can reflect both the macroscopic structural characteristics of the Earth's surface and the microscopic local differences.
Monthly evapotranspiration datasets (2000-2013) with 30m spatial resolution over oasis in the Middle Reaches of Heihe River Basin Version 1.0 are based on multi-source remote sensing data. The latest ET Watch model is used to estimate the raster image data. Its temporal resolution is monthly and spatial resolution is 30 meters. The data cover the middle reaches of Zhangye oasis area in millimeters. The data types include month, quarter, and year data.
The projection information of the data is as follows:
Albers equivalent conical projection,
Central meridian: 110 degrees,
First secant: 25 degrees,
Second secant: 47 degrees,
Coordinate west deviation: 4000000 meters.
The file naming rules are as follows:
Monthly cumulative ET value file name: heihe-midoasis-30m\_2013m01\_eta.tif
Among them, heihe indicates the Heihe River Basin, midoasis indicates the middle oasis area, 30m indicates the resolution is 30 meters, 2013 indicates 2013, m01 indicates January, eta indicates actual evapotranspiration data, and tif indicates that the data is in tif format;
The ET value file for each season is named: heihe-midoasis-30m\_2013s01\_eta.tif
Among them, heihe indicates the Heihe River Basin, midoasis indicates the middle oasis area, 30m indicates the resolution is 30 meters, 2013 indicates 2013, s01 indicates 1-3 months, for the first quarter, eta indicates actual evapotranspiration data, and tif indicates that the data is in tif format;
The annual cumulative value file name: heihe-midoasis-30m\_2013y\_eta.tif
Among them, heihe indicates the Heihe River Basin, midoasis indicates the middle oasis area, 30m indicates the resolution is 30 meters, 2013 indicates 2013, y indicates the year, eta indicates the actual evapotranspiration data, and tif indicates that the data is in tif format.

2、Keywords

Theme：Evapotranspiration,Atmospheric Water Vapor
Discipline：Atmosphere
Places：Heihe River Basin, Middle Reaches of Heihe River Basin
Time：2000-2013

3、Data details

1.Scale：1000000

2.Projection：4326

3.Filesize：7567.36MB

4.Data format：栅格数据

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：39.4 | - |
| west：99.8 | - | east：100.9 |
| - | south：38.7 | - |

5、Time frame:2000-01-10 16:00:00+00:00--2014-01-09 16:00:00+00:00

6、Reference method

References to data:

WU Bingfang. Monthly evapotranspiration dataset with 30m spatial resolution over oasis in the middle reaches of the Heihe River Basin Version 1.0 (2000-2013). A Big Earth Data Platform for Three Poles, doi:10.3972/heihe.1022.2015.db2015

References to articles:

Liu S F, Xiong J and Wu B F. 2011. ETWatch: a method of multi-resolution ET data fusion. Journal of Remote Sensing,15(2): 255–269.

Bingfang Wu, Nana Yan,Jun Xiong,W.G.M. Bastiaanssen, Weiwei Zhu, Alfred Stein. Validation of ETWatch using field measurements at diverse landscapes:A case study in Hai Basin of China. Journal of Hydrology. 436-437(2012) 67-80.

7、Supporting project information

8、Data resource provider

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