A Big Earth Data Platform for Three Poles

**Simulations of SWAT model under multiple scenarios in the upper and middle reaches of the Heihe River Basin (2011-2030)**

1、Description

This data is SWAT scenario simulation data in the middle and upper reaches of Heihe River Basin. Scenarios include historical trend scenario (HT), ecological protection scenario (EP), strict ecological protection scenario (SEP), economic development scenario (ED) and rapid economic development scenario (red). Firstly, the dyna\_clue model is used to simulate the land use change under different scenarios, and then the simulated land use map under different scenarios is imported into the SWAT model to simulate the daily and monthly runoff scenario data of the upstream outlet (Yingluo gorge) and the middle outlet (Zhengyi gorge) of the Heihe River Basin (assuming other conditions are the same). The period is 2011-2030. The data format is excel.

2、Keywords

Theme：Surface Water,Land use,Land Resources,Runoff  
Discipline：Terrestrial Surface,Human-nature Relationship  
Places：Heihe River Basin, Upper Reaches of Heihe Basin, Middle Reaches of Heihe River Basin  
Time：

3、Data details

1.Scale：None

2.Projection：4326

3.Filesize：0.7MB

4.Data format：EXCEL

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：39.85 | - |
| west：98.51 | - | east：101.83 |
| - | south：37.72 | - |

5、Time frame:2011-01-13 19:00:00+00:00--2031-01-13 01:00:00+00:00

6、Reference method

References to data:

NAN Zhuotong, ZHANG Ling. Simulations of SWAT model under multiple scenarios in the upper and middle reaches of the Heihe River Basin (2011-2030). A Big Earth Data Platform for Three Poles, doi:10.3972/heihe.113.2014.db2015

References to articles:

张凌， 黑河流域中上游土地利用变化和水文响应多情景分析[D]. 中国科学院大学,p1-82.

7、Supporting project information

8、Data resource provider

name: NAN Zhuotong  
unit: Cold and Arid Regions Environmental and Engineering Research Institute, Chinese Academy of Sciences  
email: nztong@lzb.ac.cn  
  
name: ZHANG Ling  
unit: Cold and Arid Regions Environmental and Engineering Research Institute, Chinese Academy of Sciences  
email: zhanglingky@lzb.ac.cn