A Big Earth Data Platform for Three Poles

**Gridded population data of the Heihe river basin (2000)**

1、Description

In 2000, the population grid data of Heihe River Basin was generated based on 1:100000 land use data and population statistics data of each county in 2000.  
Using principal component analysis and factor analysis, four factors are extracted from 11 regionalization indexes, and the Heihe River Basin is divided into four population distribution characteristic regions by using factor scores for hierarchical clustering. The linear regression model between rural residential land, cultivated land area and rural population is established based on the population statistical data of each county in 2000. The total population of each district and county is controlled. The population coefficient is adjusted according to the principle of different population distribution characteristics. The cultivated land population distribution coefficient is modified in the middle green continent, and the grassland population distribution is increased in the upstream mountainous area and the downstream desert oasis area Coefficient. The spatial distribution of urban population density in river basin is simulated by using the exponential model. Based on the above methods, the population spatial distribution results of 25m grid in Heihe River Basin and the data of 1km grid on scale are finally obtained. At the township level, the accuracy of the results of population spatialization is verified, and compared with the population data of Heihe River Basin estimated by the existing databases (GPW 1995, UNEP / grid1995, landscan 2002 and cn2000pop). The results show that the methods and models used in this study can obtain more accurate spatial distribution data of population in the basin.

2、Keywords

Theme：Spatial distribution of population,Population  
Discipline：Human-nature Relationship  
Places：Heihe River Basin  
Time：2000

3、Data details

1.Scale：None

2.Projection：4326

3.Filesize：2873.6MB

4.Data format：栅格

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：42.42 | - |
| west：97.24 | - | east：102.08 |
| - | south：37.44 | - |

5、Time frame:2018-11-28 02:46:58+00:00--2018-11-28 02:46:58+00:00

6、Reference method

References to data:

MA Mingguo, WANG Xuemei. Gridded population data of the Heihe river basin (2000). A Big Earth Data Platform for Three Poles, doi:10.3972/heihe.015.2013.db2013

References to articles:

王雪梅,李新,马明国. (2007). 干旱区内陆河流域人口统计数据的空间化—以黑河流域为例[J]. 干旱区资源与环境, 06, 39-47.

7、Supporting project information

8、Data resource provider

name: MA Mingguo  
unit: Cold and Arid Regions Environmental and Engineering Research Institute, Chinese Academy of Sciences  
email: mmg@lzb.ac.cn  
  
name: WANG Xuemei  
unit:   
email: