A Big Earth Data Platform for Three Poles

**Dataset of urban built-up area in China (1992-2020) V1.0**

1、Description

This dataset derives from the articles: (1) He, C., Liu, Z., Tian, J., & Ma, Q., (2014). Urban expansion dynamics and natural habitat loss in China: a multiscale landscape perspective. Global change biology, 20(9), 2886-2902.（2）Xu, M., He, C., Liu, Z., Dou, Y. (2016). How Did Urban Land Expand in China between 1992 and 2015? A Multi-Scale Landscape Analysis. PLoS ONE 11 (5): e0154839. To produce this dataset, the nighttime light data, vegetation index data, and land surface temperature data were preprocessed to obtain the multi-source remote sensing data in China from 1992 to 2020, and the economic regionalization, selection of samples, support vector machine classification, and inter-annual correction were used to extract the dynamic information of urban built-up area. According to the accuracy assessment based on Landsat TM/ETM+ data, Kappa coefficient is 0.60, overall accuracy is 92.62% This dataset has been used to assess the impacts of urban expansion on natural habitats and cropland, and can provide data support for understanding China’s urban expansion and its effects.

2、Keywords

Theme：Remote Sensing Product,Land Use/Land Cover,Remote Sensing Technology,Land use change,Land cover change,Urban and rural area  
Discipline：Terrestrial Surface,Remote Sensing Technology,Human-nature Relationship  
Places：China  
Time：1992 to 2020

3、Data details

1.Scale：None

2.Projection：Albers

3.Filesize：1.45MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：54.69 | - |
| west：67.82 | - | east：136.58 |
| - | south：15.23 | - |

5、Time frame:1991-12-31 16:00:00+00:00--2020-12-31 03:59:59+00:00

6、Reference method

References to data:

XU Min , HE Chunyang, LU Wenlu , LIU Zhifeng. Dataset of urban built-up area in China (1992-2020) V1.0. A Big Earth Data Platform for Three Poles, doi:10.11888/HumanNat.tpdc.2728512022

References to articles:

He, C.Y., Liu, Z.F., Tian, J., & Ma, Q. (2014). Urban expansion dynamics and natural habitat loss in China: a multiscale landscape perspective. Global change biology, 20(9), 2886-2902.  
  
Xu, M., He, C.Y., Liu, Z.F., & Dou, Y.Y. (2016). How Did Urban Land Expand in China between 1992 and 2015? A Multi-Scale Landscape Analysis. PLoS ONE, 11(5), e0154839. doi:10.1371/journal.pone.0154839

7、Supporting project information

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8、Data resource provider

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