A Big Earth Data Platform for Three Poles

**Dataset of global future urban expansion (2020-2070) V1.0**

1、Description

This dataset derives from the article: He, C., Liu, Z., Wu, J., Pan, X., Fang, Z., Li, J., Bryan, B.A. (2021). Future global urban water scarcity and potential solutions. Nature Communications, 12, 4667. https://doi.org/10.1038/s41467-021-25026-3. This dataset includes global urban land information under different shared socioeconomic pathways from 2020 to 2070. The production process of this dataset mainly includes: (1) establishing a linear regression model based on the urban land data (downloaded from https://doi.pangaea.de/10.1594/PANGAEA.892684) and urban population data from 1992 to 2016 to calculate the future urban land demand; (2) using the LUSD-urban model to simulate the spatial distribution of urban land. The dataset can support the assessment of effects of future global urban expansion.

2、Keywords

Theme：Land Use/Land Cover,Land use change,Land cover change,Urban and rural area
Discipline：Terrestrial Surface,Human-nature Relationship
Places：global
Time：2020 to 2070

3、Data details

1.Scale：None

2.Projection：WGS84

3.Filesize：23.01MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：88.47 | - |
| west：-180.0 | - | east：180.0 |
| - | south：-58.37 | - |

5、Time frame:None--None

6、Reference method

References to data:

HE Chunyang, YANG Yanjie , LIU Zhifeng. Dataset of global future urban expansion (2020-2070) V1.0. A Big Earth Data Platform for Three Poles, doi:10.11888/HumanNat.tpdc.2728532022

References to articles:

He, C.Y., Liu, Z.F., Wu, J.G., Pan, X.H., Fang, Z.H., Li, J.W., & Bryan., B.A. (2021). Future global urban water scarcity and potential solutions. Nature Communications, 12, 4667. https://doi.org/10.1038/s41467-021-25026-3

7、Supporting project information

National Key R&D Program of China (Grant No. 2019YFA0607203)
Second Tibetan Plateau Scientific Expedition and Research Program (Grant No. 2019QZKK0405)

8、Data resource provider

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