A Big Earth Data Platform for Three Poles

**30m land use and cover maps for the Sahel-Sudano-Guinean region of Africa (1990-2020)**

1、Description

This data set is a 30m land use / cover classification product in the Sahel region of Africa every five years from 1990 to 2020. The product is based on a collaborative framework of land cover classification integrating machine learning and multiple data fusion, and integrates supervised land cover classification with existing thematic land cover maps by using Google Earth engine (GEE) cloud computing platform. The classification system adopts FROM\_ GLC classification system includes 8 categories: cultivated land, forest, grassland, shrub, wetland, water body, impervious surface and bare land. The data set has been verified by a large number of seasonal samples in the Sahel region. The overall accuracy of the data set is about 75%, and the accuracy of change area detection is more than 70%. It is also very similar to FAO and the existing land cover map. The data set can provide data support for the sustainable use of land resources and environmental protection in the Sahel region of Africa.

2、Keywords

Theme：Desert,Land Use/Land Cover,Land use change,Land cover pattern,Desert ecosystem
Discipline：Terrestrial Surface
Places：the Sahel Region
Time：1990-2020

3、Data details

1.Scale：None

2.Projection：WGS84

3.Filesize：8673.28MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：30.45 | - |
| west：-20.0 | - | east：55.0 |
| - | south：0.0 | - |

5、Time frame:None--None

6、Reference method

References to data:

YU Le . 30m land use and cover maps for the Sahel-Sudano-Guinean region of Africa (1990-2020). A Big Earth Data Platform for Three Poles, doi:10.11888/Terre.tpdc.2720212022

References to articles:

Zhao,J.Y., Yu, L., Liu, H., Huang, H.B., Wang, J., & Gong, P. (2021). Towards an open and synergistic framework for mapping global land cover. PeerJ, 9, e11877.

Feng, D., Yu, L., Zhao, Y., Cheng, Y., Xu, Y., Li, C., & Gong, P. (2018). A multiple dataset approach for 30-m resolution land cover mapping: a case study of continental Africa. International Journal of Remote Sensing, 39(12), 3926-3938.

Xu, Y., Yu, L., Feng, D., Peng, D., Li, C., Huang, X., ... & Gong, P. (2019). Comparisons of three recent moderate resolution African land cover datasets: CGLS-LC100, ESA-S2-LC20, and FROM-GLC-Africa30. International Journal of Remote Sensing, 40(16), 6185-6202.

7、Supporting project information

Driving Mechanisms of Land Use and Cover Change in the Sahel: Impacts and Responses

8、Data resource provider

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