A Big Earth Data Platform for Three Poles

**Drainage networks of Lancang-Mekong river basin (flow direction, flow accumulation, river networks)**

1、Description

1) Data content (including elements and significance)  
This data set contains information of flow direction, accumulation of vector river network of Lancang Mekong River Basin.  
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2) Data sources and processing methods  
In this data set, the remote sensing stream buring (RSSB) method (Wang et al., 2021) is adopted, and the high-precision elevation model MERIT-DEM and Sentinel-2 optical imagery are fused.  
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3) Data quality description  
Validations show that this data set has high spatial accuracy (Wang et al, 2021).  
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4) Data application achievements and Prospects  
This data set provides basic information of river networks, which can be used for hydrological model, land surface model, earth system model, as well as for mapping and spatial statistical analysis.

2、Keywords

Theme：Digital elevation model,Topography,Surface Water,Rivers/Streams,Terrestrial Surface Remote Sensing,Hydrological remote sensing products  
Discipline：Terrestrial Surface  
Places：Mekong River, Lancang River  
Time：2015-2020

3、Data details

1.Scale：None

2.Projection：WGS84

3.Filesize：3790.0MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：35.0 | - |
| west：90.0 | - | east：110.0 |
| - | south：9.0 | - |

5、Time frame:2015-11-30 16:00:00+00:00--2019-12-31 16:00:00+00:00

6、Reference method

References to data:

WANG Zifeng. Drainage networks of Lancang-Mekong river basin (flow direction, flow accumulation, river networks). A Big Earth Data Platform for Three Poles, doi:10.1016/j.rse.2020.1122812020

References to articles:

Wang, Z., Liu, J., Li, J., Meng, Y., Pokhrel, Y., & Zhang, H. (2021). Basin-scale high-resolution extraction of drainage networks using 10-m Sentinel-2 imagery. Remote Sensing of Environment, 255, 112281. https://doi.org/10.1016/j.rse.2020.112281

7、Supporting project information

Pan-Third Pole Environment Study for a Green Silk Road-A CAS Strategic Priority A Program

8、Data resource provider

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