A Big Earth Data Platform for Three Poles

**Dataset of classification, spatial distribution, and total accumulation of unconsolidated sediments in the Yarlung Tsangpo River Basin (2019–2022)**

1、Description

The considerable amount of solid clastic material in the Yarlung Tsangpo River Basin (YTRB)) is one of the important components in recording the uplift and denudation history of the Tibet Plateau. Different types of unconsolidated sediments directly reflect the differential transport of solid clastic material. Revealing its spatial distribution and total accumulation plays an important value in the uplift and denudation process of the Tibet Plateau. The dataset includes three subsets: the type and spatial distribution of unconsolidated sediments in theYTRB, the thickness spatial distribution, and the quantification of total deposition. Taking remote sensing interpretation and geological mapping as the main technical method, the classification and spatial distribution characteristics of unconsolidated sediments in the whole YTRB (16 composite sub-basins) were comprehensively clarified for the first time. Based on the field measurement of sediment thickness, the total accumulation was preliminarily estimated. A massive amount of sediment is an important material source of landslide, debris flow and flood disasters in the basin. Finding out its spatial distribution and total amount accumulation not only has theoretical significance for revealing the key information recorded in the process of sediment source to sink, such as surface environmental change, regional tectonic movement, climate change and biogeochemical cycle, but also has important application value for plateau ecological environment monitoring and protection, flooding disaster warning and prevention, major basic engineering construction, and soil and water conservation.

2、Keywords

Theme：Fluvial sediments,Earth SurFace Processes,Unconsolidated sediments,Image interpretation,Remote Sensing Technology,erosion,Terrestrial Surface Remote Sensing,Sedimentary Record,Quaternary Geology and Geomorphology
Discipline：Terrestrial Surface,Remote Sensing Technology,Solid earth
Places：Yarlung Tsangpo River
Time：Quaternary

3、Data details

1.Scale：None

2.Projection：

3.Filesize：6.84MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：31.28 | - |
| west：82.01 | - | east：97.1 |
| - | south：27.81 | - |

5、Time frame:None--None

6、Reference method

References to data:

ZHANG Jian, WANG Chengshan , LIN Zhipeng, ZHANG Chenjin , MA Xinduo, BAI Yalige, HU Taiyu, HAN Zhongpeng, WANG Xinhang. Dataset of classification, spatial distribution, and total accumulation of unconsolidated sediments in the Yarlung Tsangpo River Basin (2019–2022). A Big Earth Data Platform for Three Poles, doi:10.11888/SolidEar.tpdc.2724422022

References to articles:

7、Supporting project information

Second Tibetan Plateau Scientific Expedition Program

8、Data resource provider

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