A Big Earth Data Platform for Three Poles

**The second glacier inventory dataset of China (version 1.0) (2006-2011)**

1、Description

China's second glacier inventory uses the high-resolution Landsat TM/ETM+ remote sensing satellite data as the main glacier boundary data source and extracts the data source with the latest global digital elevation model, SRTM V4, as the glacier attribute, using the current international ratio threshold segmentation method to extract the glacier boundary in bare ice areas. The ice ridge extraction algorithm is developed to extract the glacier ice ridge, and it is used for the segmentation of a single glacier. At the same time, the international general algorithm is used to calculate the glacier attributes, so that the vector data and attribute data that contain the glacier information of the main glacier regions in west China are obtained. Compared with some field GPS field measurement data and higher resolution remote sensing images (such as from QuickBird and WorldView), the glacial vector data in the second glacier inventory data set of China have higher positioning accuracy and can meet the requirements for glacial data in national land, water conservancy, transportation, environment and other fields.
Glacier inventory attributes:
Glc\_Name, Drng\_Code, FCGI\_ID, GLIMS\_ID, Mtn\_Name, Pref\_Name, Glc\_Long, Glc\_Lati, Glc\_Area, Abs\_Accu, Rel\_Accu, Deb\_Area, Deb\_A\_Accu, Deb\_R\_Accu, Glc\_Vol\_A, Glc\_Vol\_B, Max\_Elev, Min\_Elev, Mean\_Elev, MA\_Elev, Mean\_Slp, Mean\_Asp, Prm\_Image, Aux\_Image, Rep\_Date, Elev\_Src, Elev\_Date, Compiler, Verifier.
For a detailed data description, please refer to the second glacier inventory data description.

2、Keywords

Theme：Glaciers,glacier inventory,Glacier(Ice Sheet)
Discipline：Cryosphere
Places：China, glacier regions
Time：2006-2011

3、Data details

1.Scale：250000

2.Projection：4326

3.Filesize：158.0MB

4.Data format：SHP

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：49.6 | - |
| west：73.2 | - | east：105.555265 |
| - | south：27.0 | - |

5、Time frame:2006-11-27 00:00:00+00:00--2011-10-28 00:00:00+00:00

6、Reference method

References to data:

LIU Shiyin, GUO Wanqin, XU Junli. The second glacier inventory dataset of China (version 1.0) (2006-2011). A Big Earth Data Platform for Three Poles, doi:10.3972/glacier.001.2013.db2012

References to articles:

Guo, W.Q., Liu, S.Y., Xu, J.L., et al. (2015). The second Chinese glacier inventory: data, methods and results. Journal of Glaciology, 61(226), 357-372. doi: 10.3189/2015JoG14J209

刘时银, 姚晓军, 郭万钦等. (2015). 基于第二次冰川编目的中国冰川现状. 地理学报, 70(1), 3-16.

刘时银, 张勇, 刘巧等. 气候变化对冰川影响与风险研究. 2017, 科学出版社.

7、Supporting project information

8、Data resource provider

name: GUO Wanqin
unit: Cold and Arid Regions Environmental and Engineering Research Institute, Chinese Academy of Sciences
email: guowq@lzb.ac.cn

name: LIU Shiyin
unit: Cold and Arid Regions Environmental and Engineering Research Institute, Chinese Academy of Sciences
email: liusy@lzb.ac.cn

name: XU Junli
unit:
email: xujunli05@lzb.ac.cn