A Big Earth Data Platform for Three Poles

**Basic datasets of the Tibetan highway in Chinese Cryospheric Information System**

1、Description

Chinese Cryospheric Information System is a comprehensive information system for the management and analysis of cryospheric data over China. The establishment of Chinese Cryospheric Information System is to meet the needs of earth system science, and provide parameters and verification data for the development of response and feedback models of permafrost, glacier and snow cover to global changes under GIS framework. On the other hand, the system collates and rescues valuable cryospheric data to provide a scientific, efficient and safe management and analysis tool.
Chinese Cryospheric Information System selected three regions with different spatial scales as its main research areas to highlight the research focus. The research area along the Qinghai-Tibet highway is mainly about 700 kilometers long from Xidatan to Naqu, and 20 to 30 kilometers wide on both sides of the highway. The datasets of the Tibetan highway contains the following types of data:
1. Cryosphere data.Including: snow depth distribution.
2. Natural environment and resources.Include:
Digital elevation topography (DEM) : elevation elevation, elevation zoning, slope and slope direction;
Fundamental geology: Quatgeo
3. Boreholes: drilling data of 200 boreholes along the qinghai-tibet highway.
Engineering geological profile (CAD) : lithologic distribution, water content, grain fraction data, etc
4. Model of glacier mass equilibrium distribution along qinghai-tibet highway: prediction of frozen soil grid data.
The graphic data along the qinghai-tibet highway includes 13 map scales of 1:250,000.The grid size is 100×100m.
For details, please refer to the documents (in Chinese): "Chinese Cryospheric Information System design. Doc", "Chinese Cryospheric Information System data dictionary. Doc", "Database of the Tibetan highway. Doc".

2、Keywords

Theme：Digital elevation model,Topography,Ground Water,Frozen Ground,Hydrogeology
Discipline：Terrestrial Surface,Cryosphere
Places：the Qinghai-Tibet Highway
Time：1997

3、Data details

1.Scale：None

2.Projection：None

3.Filesize：311.0MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：36.0 | - |
| west：91.0 | - | east：94.9 |
| - | south：30.77 | - |

5、Time frame:1997-01-12 08:00:00+00:00--1998-01-11 08:00:00+00:00

6、Reference method

References to data:

LI Xin. Basic datasets of the Tibetan highway in Chinese Cryospheric Information System. A Big Earth Data Platform for Three Poles, doi:10.11888/Geogra.tpdc.2703552020

References to articles:

Li, X., Cheng, G.D., Wu, Q.B., & Ding, Y.J. (2003). Modeling Chinese cryospheric change by using GIS technology. Cold Regions Science and Technology, 36(1-3), 1-9.

7、Supporting project information

8、Data resource provider

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