Monthly Summaries of Soil Temperature and Soil Moisture in China, Version 1

USER GUIDE

How to Cite These Data

As a condition of using these data, you must include a citation:

Paetzold, R., ed 2003. *Monthly Summaries of Soil Temperature and Soil Moisture in China, Version 1*. [Indicate subset used]. Boulder, Colorado USA. NASA National Snow and Ice Data Center Distributed Active Archive Center. https://doi.org/10.7265/67qf-zj58. [Date Accessed].

FOR QUESTIONS ABOUT THESE DATA, CONTACT NSIDC@NSIDC.ORG

FOR CURRENT INFORMATION, VISIT https://nsidc.org/data/GGD625

National Snow and Ice Data Center

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1 DETAILED DATA DESCRIPTION

A Campbell Scientific CR10X-2M datalogger records day, time, battery (voltage), and internal temperature. A combination of the following below-ground sensors are attached to the datalogger: Vitel Hydra dielectric constant soil moisture and temperature sensors, Campbell 107 soil temperature sensors, MRC soil temperature probes, and International Thermal Instrument heat flux sensors.

Some sites have above-ground sensors at various heights, including Vaisala HMP45C air temperature and relative humidity sensors, TE525 rain gauges, EKO MR21 albedo sensors, and Epply PIR infrared sensors.

Table 1 displays the depths (in cm) of the active layer at each station. See the Appendix of this document for graphs of soil temperature profiles from all nine stations.

Table 1. Active-layer depth at each site

Station	1998	1999	2000	2001	Comments
Fenghuoshan	136.0	137.4	140.0	143.0	Station initiated on 19 May 1998; incomplete data for 1998; incomplete data from 26 May 2001 to 01 August 2001
Ecology		261.0	263.5	263.8	Station initiated on 02 August 1999; incomplete data for 1999
Wuli		No data	259.8		Station initiated on 15 August 1999; insufficient data to make estimate for 1999
Two Rivers (lower)		No data	102.0		Station initiated on 08 August 1999; insufficient data to make estimate for 1999; incomplete data from January through August, 2001
Two Rivers (upper)		No data			Station initiated on 28 September 1999; insufficient data to make estimates for 1999 and 2000
Glacier			No data		Station initiated on 10 August 2000; insufficient data to make estimate for 2000
Da Xi Gou				No data	Station initiated on 23 May 2001; insufficient data to make estimate for 2001
Deep Borehole				150.9	Station initiated on 23 May 2001; incomplete data
Shallow Borehole				170.0	Station initiated on 22 May 2001; incomplete data

See the Technical Reference on Soil Characteristics for a summary of soils throughout the study area.

1.1 Format and File Naming Convention

Data are delivered in ASCII text files. An Excel file containing the list of variables available for each station is offered as a Technical Reference (with a spreadsheet for each station). The ASCII data file for each of the nine stations contains average, median, standard deviation, maximum, and minimum values for the variables listed in the spreadsheets. Data file names are as listed below:

```
ggd625_da_xi_gou.txt
ggd625_deep_borehole.txt
ggd625_ecology_station.txt
ggd625_fenghuoshan.txt
ggd625_glacier_station.txt
ggd625_shallow_borehole.txt
ggd625_tworivers_lower.txt
ggd625_tworivers_upper.txt
ggd625_wuli.txt
```

The file `ggd625_china_soiltemp.xls` is an Excel spreadsheet of data from all stations. The file `ggd625_china_aldepth.txt` is an ASCII text file of yearly depth from all stations.

1.2 Spatial and Temporal Information

Table 2 provides the location and temporal coverage of the data for each station. Geographic coordinates are averaged from two or more GPS measurements. The given date ranges have incomplete coverage; some stations have large gaps of data.

Table 2. Location and temporal coverage for each station

Station	Latitude	Longitude	Temporal Coverage	Description
Fenghuoshan	34°43'46.2"N	92°53'30.25"E	June 1998 through November 2001	On the Qinghai-Xizang (Tibet) Plateau in Qinghai Province south of Wudaoliang, near km marker 3068 on the road between Golmud and Lhasa. Fenghuoshan research station.

Station	Latitude	Longitude	Temporal Coverage	Description
Ecology	35°25'58.9"N	93°35'54.65"E	August 1999 through December 2001	On the Qinghai-Xizang (Tibet) Plateau in Qinghai Province, near km marker 2952 on the road between Golmud and Lhasa. Ecology research station.
Wuli	34°28'14.1"N	92°43'37.35"E	September 1999 through December 2001	On the Qinghai-Xizang (Tibet) Plateau in Qinghai Province, next to the highway maintenance station on the road between Golmud and Lhasa. Wuli site.
Two Rivers, lower	31°49'6.85"N	91°44'12.85"E	October 1999 through December 2001	On the Qinghai-Xizang (Tibet) Plateau in Qinghai Province on the road between Golmud and Lhasa. Two rivers lower site, Liangdaohe A.
Two Rivers, upper	31°49'15.65"N	91°44'28.5"E	October 1999 through December 2001	On the Qinghai-Xizang (Tibet) Plateau in Qinghai Province on the road between Golmud and Lhasa. Two rivers upper site, Liangdaohe B.
Kunlun Basin	35°37'16.7"N	94°03'44.8"E	No data available	Kunlun basin on the Qinghai-Xizang (Tibet) Plateau in Qinghai Province.
Glacier	43°12'42.6"N	87°07'04.1"E	September 2000 through April 2002	South of Urumqi, China on the Glacier Research Station
Da Xi Gou	43°06'46.4"N	86°50'35.9"E	June through September 2001	Da Xi Gou, China on the Glacier Research Substation
Deep Borehole	43°07'09.2"N	86°51'09.45"E	June 2001 through May 2002	Deep borehole site, Da Xi Gou
Shallow Borehole	43°06'23.1"N	86°48'30.7"E	June 2001 through May 2002	Shallow borehole site

2 CONTACTS AND ACKNOWLEDGMENTS

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3 DOCUMENT INFORMATION

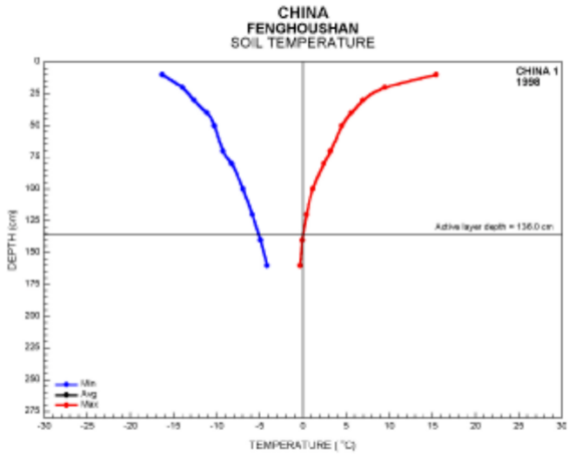
3.1 Publication Date

May 2003

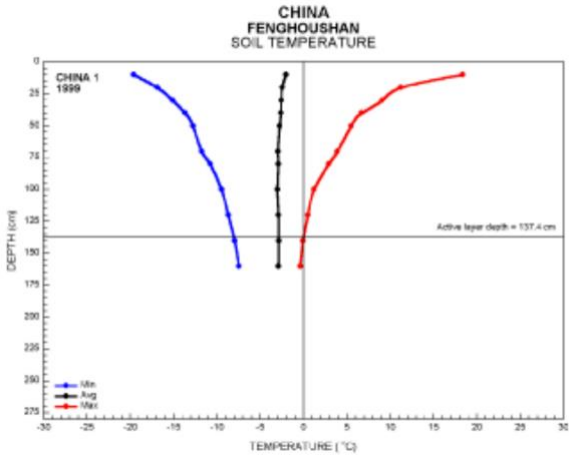
3.2 Date Last Updated

January 2021

APPENDIX – SOIL MOISTURE TEMPERATURE PROFILES



Fenghoushan station, 1998



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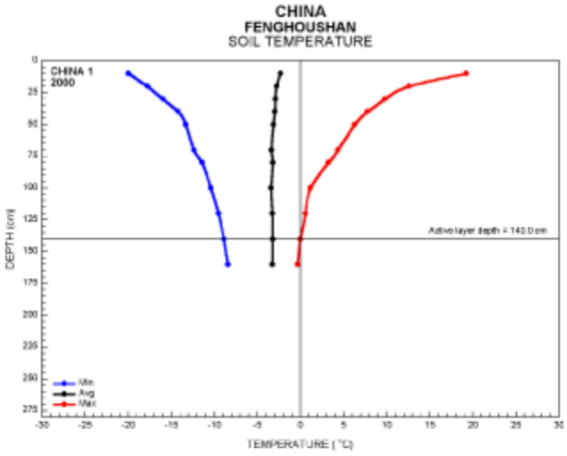

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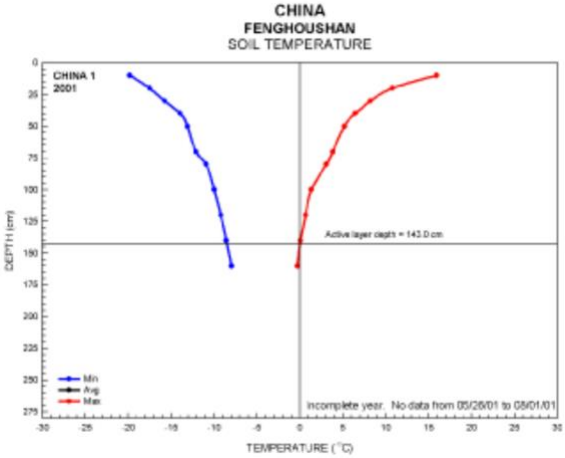

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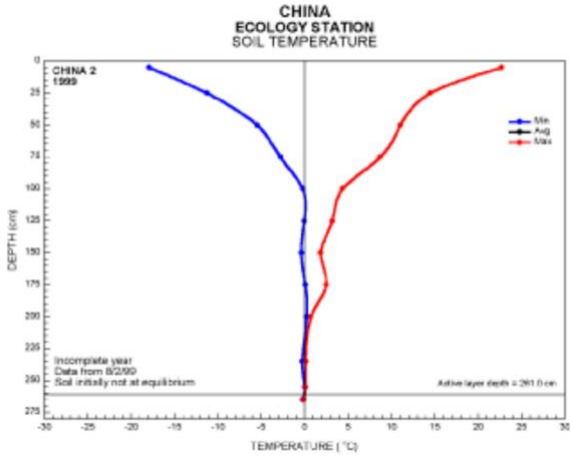

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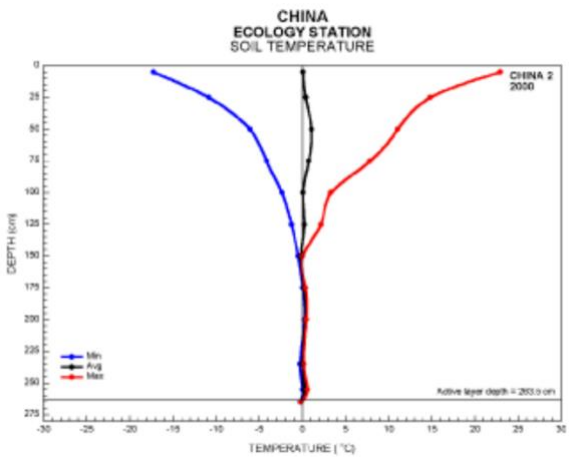

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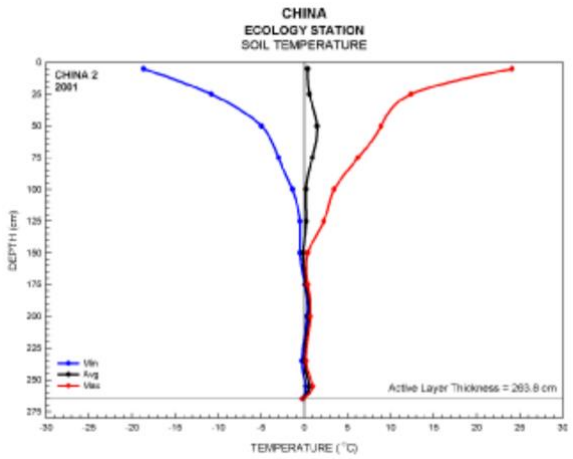

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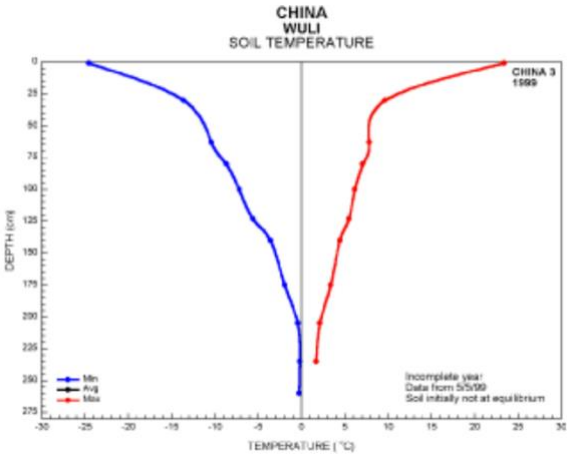
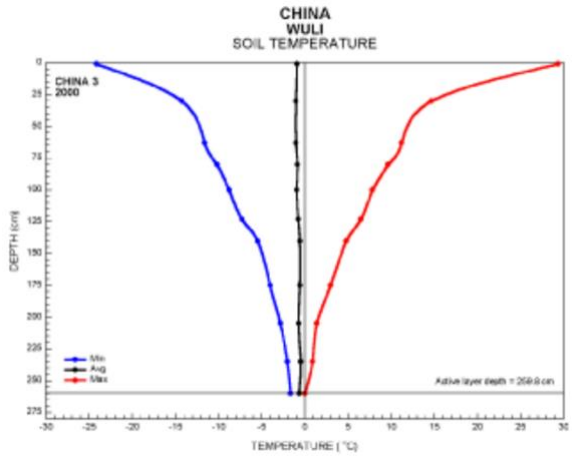


Wuli station, 1999



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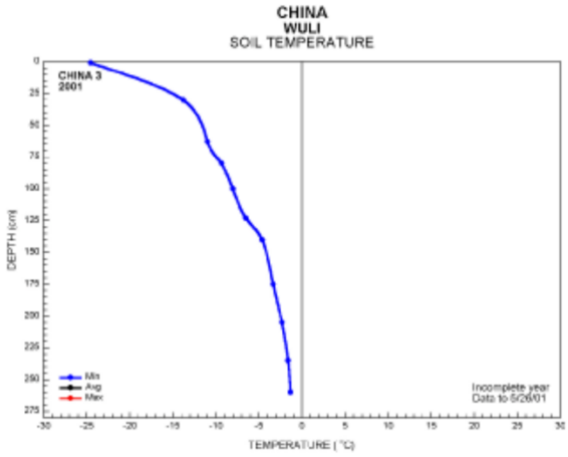

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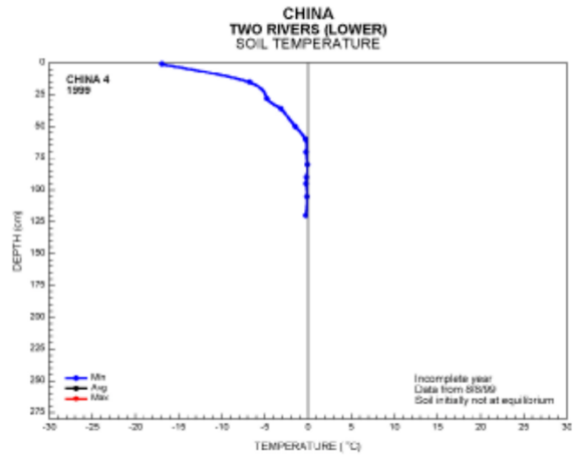
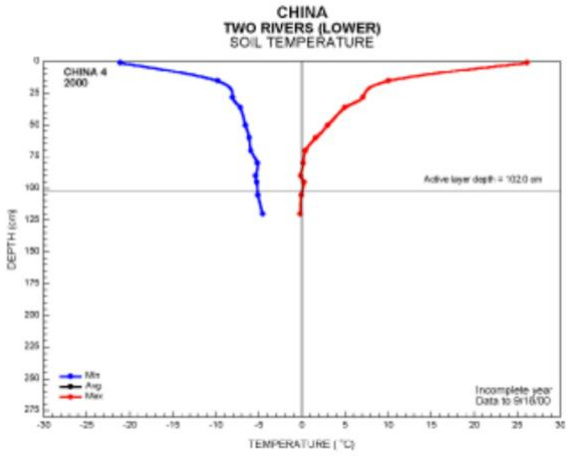


Two Rivers (lower) station, 1999



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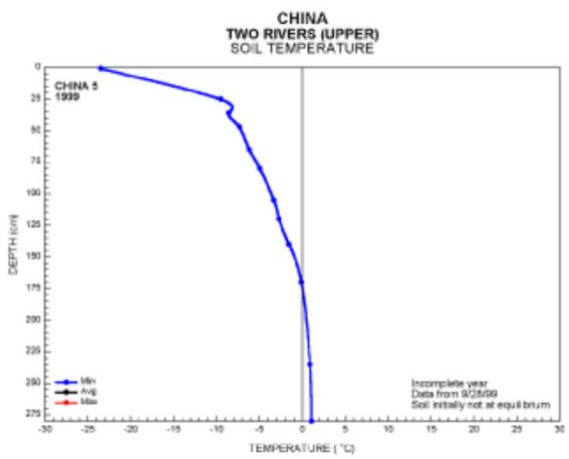

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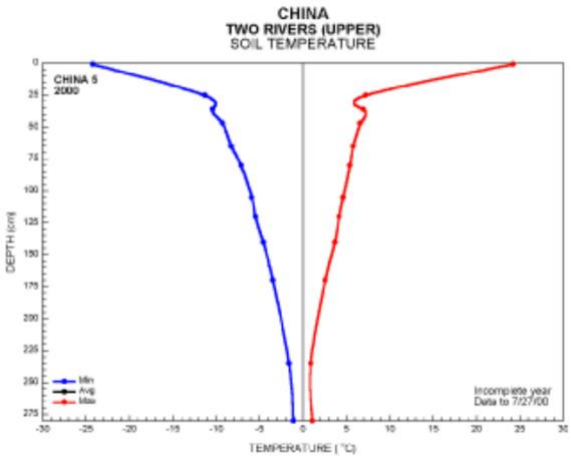

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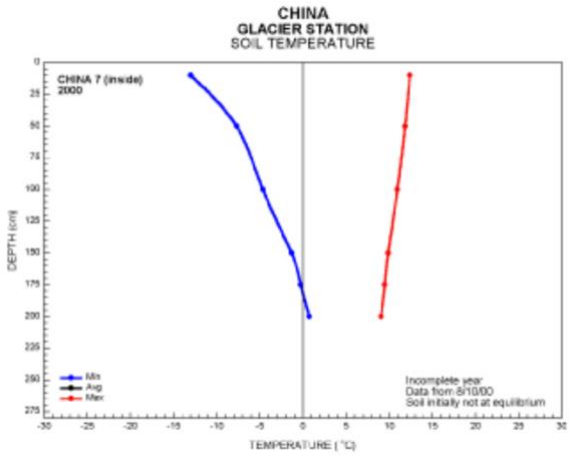
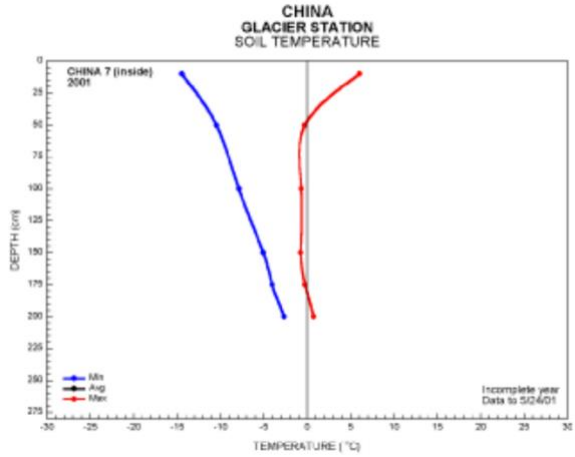
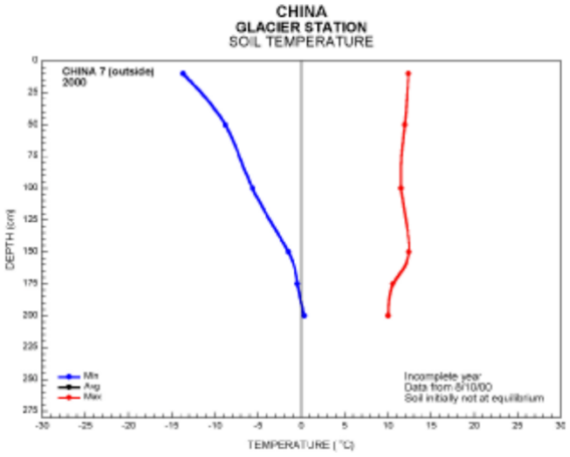


Glacier station (inside), 2000



Glacier station (inside), 2001



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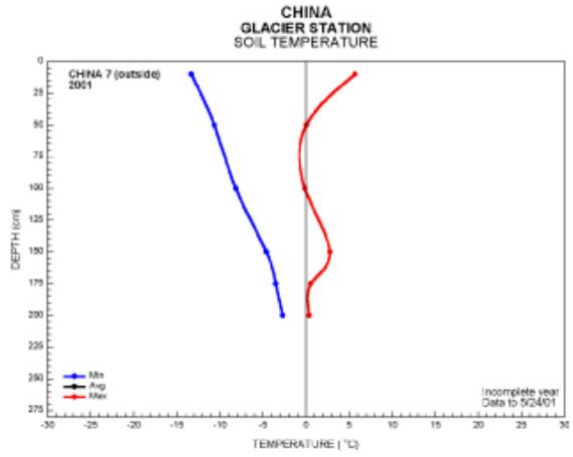

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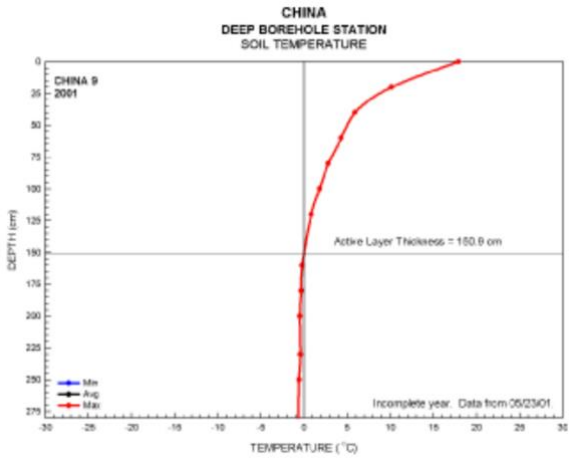

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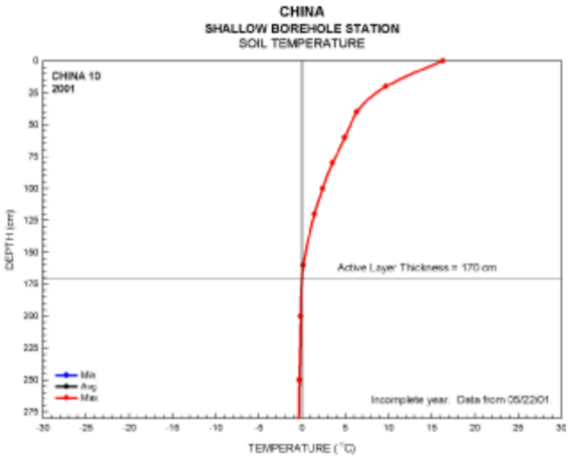

Shallow Borehole station, 2001