HiTIC-Monthly: A High Spatial Resolution (1 km×1 km) Monthly Human Thermal Index Collection over China from 2003 to 2020

1. Institutional information

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3. Dataset information

1.1 Dataset name: HiTIC-Monthly: A High Spatial Resolution (1 km×1 km) Monthly Human Thermal Index Collection over China from 2003 to 2020

1.2 Content of the data set:

The data set consists of 217 files:

1) README.pdf: this file;

2) 216 zip files: It contains the data of HiTIC-Monthly from 2003 to 2020. It is stacked by year, and each stack is composed of 12 monthly images in the NetCDF format, with the data type of Int16 and the unit of 0.01 degree Celsius (°C).

1.3 Latest version: Version 1.0 (July 2022)

4. Brief introduction

The high spatial resolution monthly human thermal index collection (HiTIC-Monthly) includes 12 commonly used indices: surface air temperature (SAT), indoor Apparent Temperature (ATin), outdoor shaded Apparent Temperature (ATout), Discomfort Index (DI), Effective Temperature (ET), Heat Index (HI), Humidex (HMI), Modified Discomfort Index (MDI), Net Effective Temperature (NET), simplified

Wet Bulb Globe Temperature (sWBGT), Wet-Bulb Temperature (WBT), and Wind Chill Temperature (WCT). This dataset has a high spatial resolution of 1 km × 1 km and covers mainland China from January 2003 to December 2020. The overall R-square, root mean square error, mean absolute error, and bias of the dataset are 0.996, 0.693°C, 0.512°C, and 0.003°C, respectively. It is stacked by year, and each stack is composed of 12 monthly images in the NetCDF format, with the data type of Int16 and the unit of 0.01 degree Celsius (°C). The projection coordinate system of the dataset is Albers Equal Area Conic Projection.

5. Coordinate projection information

Projected Coordinate System: Albers_Conic_Equal_Area

Projection: Albers

false_easting: 4000000.00000000

false_northing: 0.00000000

central_meridian: 105.00000000

standard_parallel_1: 25.00000000

standard_parallel_2: 47.00000000

latitude_of_origin: 0.00000000

Linear Unit: Meter

Geographic Coordinate System: GCS_WGS_1984

Datum: D_WGS_1984

Angular Unit: Degree

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Citation as:

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or:

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