

GPRChinaTemp1km: 1 km monthly minimum air temperature for China from January 1951 to December 2020

-----data description-----

This is a monthly gridded dataset for minimum air temperature over the main terrestrial lands of China from January 1951 to December 2020, which is generated using the Gaussian process regression (GPR) based on the meteorological station data from the China Meteorological Data Service Centre.

Region: China

Time: January 1951 to December 2020

Spatial resolution: 1 km

Temporal resolution: month

Data format: GeoTIFF

Unit: degree Celsius (°C)

-----dataset filename-----

The file name specifically shows the data information.

For example,

“Temp\_pred\_2020\_12\_Tmin.tif” means “monthly minimum air temperature of December 2020”.

All the data start with “Temp\_pred\_”

2020: year

12: month

Tmin: monthly minimum air temperature

-----storage information-----

The dataset includes 840 raster files of the monthly minimum air temperature dataset from January 1951 to December 2020 for each month.

“Suppl\_Tmin\_predict\_accuracy\_GPR.csv” contains the accuracy metrics for each raster file from January 1951 to December 2020. The accuracy metrics were obtained using the observed values of the meteorological stations, including mean absolute error (MAE), root mean square error (RMSE), and coefficient of determination ( $R^2$ ).

Each GeoTIFF raster file for each month was compressed into zip format to reduce the storage space.

Each zip file is about 40 MB.

Total storage space with zip format is about 31GB.