Environment & Society Portal

Multimedia Library Collection: Periodicals

"Recent Climate Change in Japan: Spatial and Temporal Characteristics of Trends of Temperature"

Schäfer, Dirk, and Manfred Domrös

Schäfer, Dirk, and Manfred Domrös. "Recent Climate Change in Japan: Spatial and Temporal Characteristics of Trends of Temperature." *Climate of the Past* 5, no. 1 (2009): 13–19.

In this paper temperature series of Japan were statistically analysed in order to answer the question whether recent climate change can be proved for Japan; the results were compared and discussed with the global trends. The observations in Japan started for some stations in the 1870s. Fifty-nine stations are available since 1901, 136 stations since 1959. Modern statistical methods were applied, such as Gaussian binominal low-pass filter (30 yr), trend analysis (linear regression model) including the trend-to-noise-ratio as measure of significance and the non-parametric, and non-linear trend test according to MANN (MANN's Q). According to the results of the analyses, climate change in Japan is clearly shown for temperature over 100 years (1901–2000). Annual mean temperatures increased at all stations from 0.35 (Hakodate) to 2.95°C (Tokyo). The magnitude of climate change is illustrated to increase over the recent period 1976–2000. Seasonally, the strongest warming trends were observed for winter temperatures and also increasing temperature trends prevailed in summer, with the exception of slightly decreasing trends at only four stations. (From the authors's abstract.)

2009 Dirk Schäfer and Manfred Domrös. Creative Commons Attribution 3.0 . Made available on the Environment & Society Portal for nonprofit educational purposes only, courtesy of Copernicus GmbH and the European Geosciences Union.

Download:
PDF: https://www.environmentandsociety.org/sites/default/files/key_docs/climate_change_japan.pdf

Related links:

- Climate of the Past
  http://www.climate-of-the-past.net/home.html

Periodicals Collection, Multimedia Library, Environment & Society Portal
"Recent Climate Change in Japan: Spatial and Temporal Characteristics of Trends of Temperature"
Source URL: http://www.environmentandsociety.org/node/5484
Print date: 05 November 2026 05:57:00