

GLADCHI, Viorica, DUCA, Gheorghe et al. Global warming - pro and contrary interpretations using modelling and analysis of two cities. In: International Journal of Global Warming. 2021, Vol.24, No. 2. ISSN 1758-2083.

While there is abundant scientific agreement on climate change, there are polarising views over global warming. Mathematically sound strategies are necessary to plan appropriate interventions. Hence, monthly and annual averaged temperature time series for the period 1950-2017 for two observation stations in two cities, viz., Chisinau, Moldova and Moscow, Russia are considered. The statistical analysis shows that the correlation between these two geographically different locations for monthly data is higher than the annual averaging method. The series discussed here is described by a new model using seasonal harmonic oscillations plus random noise. Within the available accuracy, the long-term trend is not statistically significant, and the data can be described using a regression equation. All discrepancies between the regression formula and the actual data fit perfectly to the normal Gaussian distribution. The general hypothesis of 'global warming' using the time series studied here cannot be confirmed; instead it provided a negative trend. Connection of temperature with energy balance and its influence on greenhouse gases are discussed.