Drei neue Rekonstruktionen von Dürre und Temperatur stützen nicht das Narrativ des Klima-Alarms

geschrieben von Chris Frey | 21. Januar 2025

Kenneth Richard

Studien aus Zentralchina, Russland und Mitteleuropa zeigen, dass es vor dem Jahr 1900, oder als die CO_2-Konzentration unter 300 ppm lag, genauso viel (oder mehr) Erwärmung und Dürre gab als derzeit.

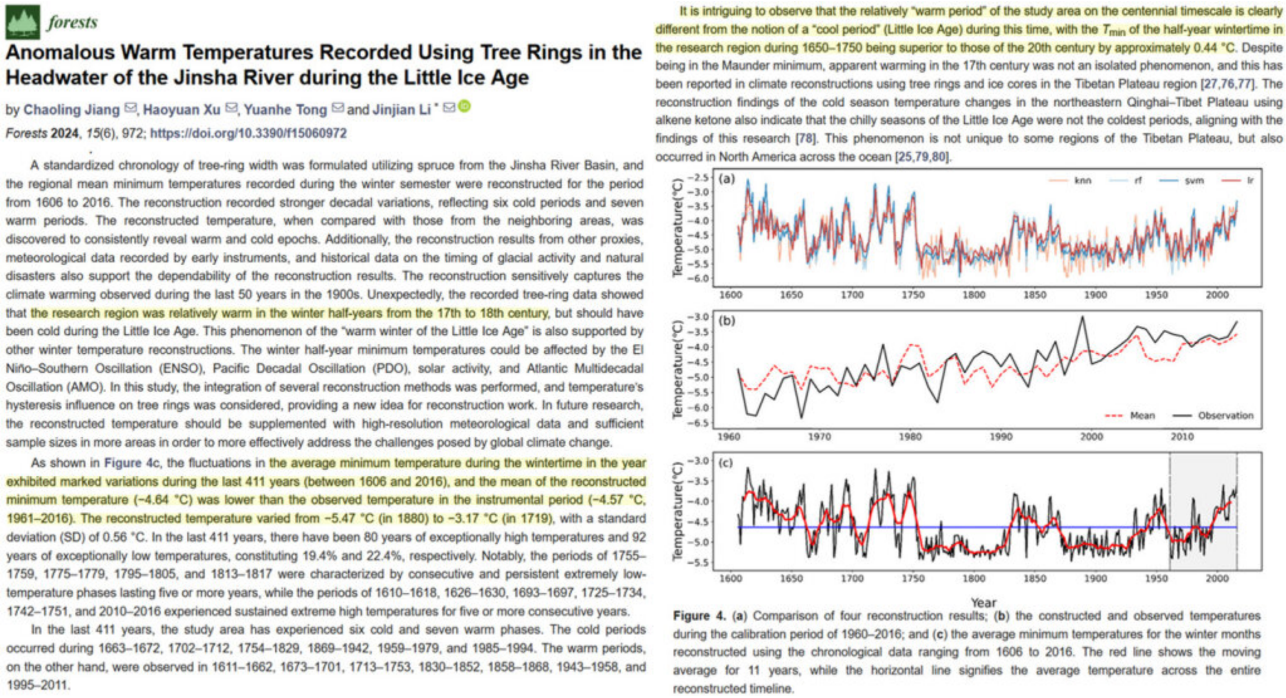
Eine neue Rekonstruktion der (winterlichen) Tiefsttemperaturen in Zentralchina von 1606 bis 2016 (Jiang et al., 2024) zeigt, dass es im 16. Jahrhundert nur in 9 Jahren (1663-1672) zu Kälteperioden kam, während es im 20. Jahrhundert 71 Jahre mit Kälteperioden gab (1900-1942, 1959-1979, 1985-1994).

Bemerkenswert ist, dass der CO_2-Gehalt während des 16. und 17. Jahrhunderts bei 278 ppm lag, während er in den 1900er Jahren von 290 ppm auf 370 ppm gestiegen ist.

Von 1650 bis 1750 lagen die Wintertemperaturen in Zentralchina um 0,44 °C höher als im 20. Jahrhundert. Die Autoren waren von diesem Temperaturergebnis überrascht, da 1650-1750 in die Zeit der Kleinen Eiszeit fällt.

„Überraschenderweise lag die niedrigste Wintertemperatur im Untersuchungsgebiet zwischen 1650 und 1750 um etwa 0,44 °C höher als im 20. Jahrhundert, was deutlich von der Vorstellung einer „kühleren“ Kleinen Eiszeit in diesem Zeitraum abweicht. Dieses Ergebnis wird durch die Temperaturergebnisse bestätigt, die aus anderen Baumringdaten aus nahe gelegenen Gebieten rekonstruiert wurden, was die Glaubwürdigkeit der Rekonstruktion bestätigt.“

Schließlich ist anzumerken, dass das Jahr 1719 um 1,4°C wärmer war (-3,17°C) als der Durchschnitt von 1961-2016 (-4,57°C).


forests

Anomalous Warm Temperatures Recorded Using Tree Rings in the Headwater of the Jinsha River during the Little Ice Age

by Chaoling Jiang, Haoyuan Xu, Yuanhe Tong and Jinjian Li *

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A standardized chronology of tree-ring width was formulated utilizing spruce from the Jinsha River Basin, and the regional mean minimum temperatures recorded during the winter semester were reconstructed for the period from 1606 to 2016. The reconstruction recorded stronger decadal variations, reflecting six cold periods and seven warm periods. The reconstructed temperature, when compared with those from the neighboring areas, was discovered to consistently reveal warm and cold epochs. Additionally, the reconstruction results from other proxies, meteorological data recorded by early instruments, and historical data on the timing of glacial activity and natural disasters also support the dependability of the reconstruction results. The reconstruction sensitively captures the climate warming observed during the last 50 years in the 1900s. Unexpectedly, the recorded tree-ring data showed that the research region was relatively warm in the winter half-years from the 17th to 18th century, but should have been cold during the Little Ice Age. This phenomenon of the "warm winter of the Little Ice Age" is also supported by other winter temperature reconstructions. The winter half-year minimum temperatures could be affected by the El Niño–Southern Oscillation (ENSO), Pacific Decadal Oscillation (PDO), solar activity, and Atlantic Multidecadal Oscillation (AMO). In this study, the integration of several reconstruction methods was performed, and temperature's hysteresis influence on tree rings was considered, providing a new idea for reconstruction work. In future research, the reconstructed temperature should be supplemented with high-resolution meteorological data and sufficient sample sizes in more areas in order to more effectively address the challenges posed by global climate change.

As shown in Figure 4c, the fluctuations in the average minimum temperature during the wintertime in the year exhibited marked variations during the last 411 years (between 1606 and 2016), and the mean of the reconstructed minimum temperature (−4.64 °C) was lower than the observed temperature in the instrumental period (−4.57 °C, 1961–2016). The reconstructed temperature varied from −5.47 °C (in 1880) to −3.17 °C (in 1719), with a standard deviation (SD) of 0.56 °C. In the last 411 years, there have been 80 years of exceptionally high temperatures and 92 years of exceptionally low temperatures, constituting 19.4% and 22.4%, respectively. Notably, the periods of 1755–1759, 1775–1779, 1795–1805, and 1813–1817 were characterized by consecutive and persistent extremely low-temperature phases lasting five or more years, while the periods of 1610–1618, 1626–1630, 1693–1697, 1725–1734, 1742–1751, and 2010–2016 experienced sustained extreme high temperatures for five or more consecutive years.

In the last 411 years, the study area has experienced six cold and seven warm phases. The cold periods occurred during 1663–1672, 1702–1712, 1754–1829, 1869–1942, 1959–1979, and 1985–1994. The warm periods, on the other hand, were observed in 1611–1662, 1673–1701, 1713–1753, 1830–1852, 1858–1868, 1943–1958, and 1995–2011.

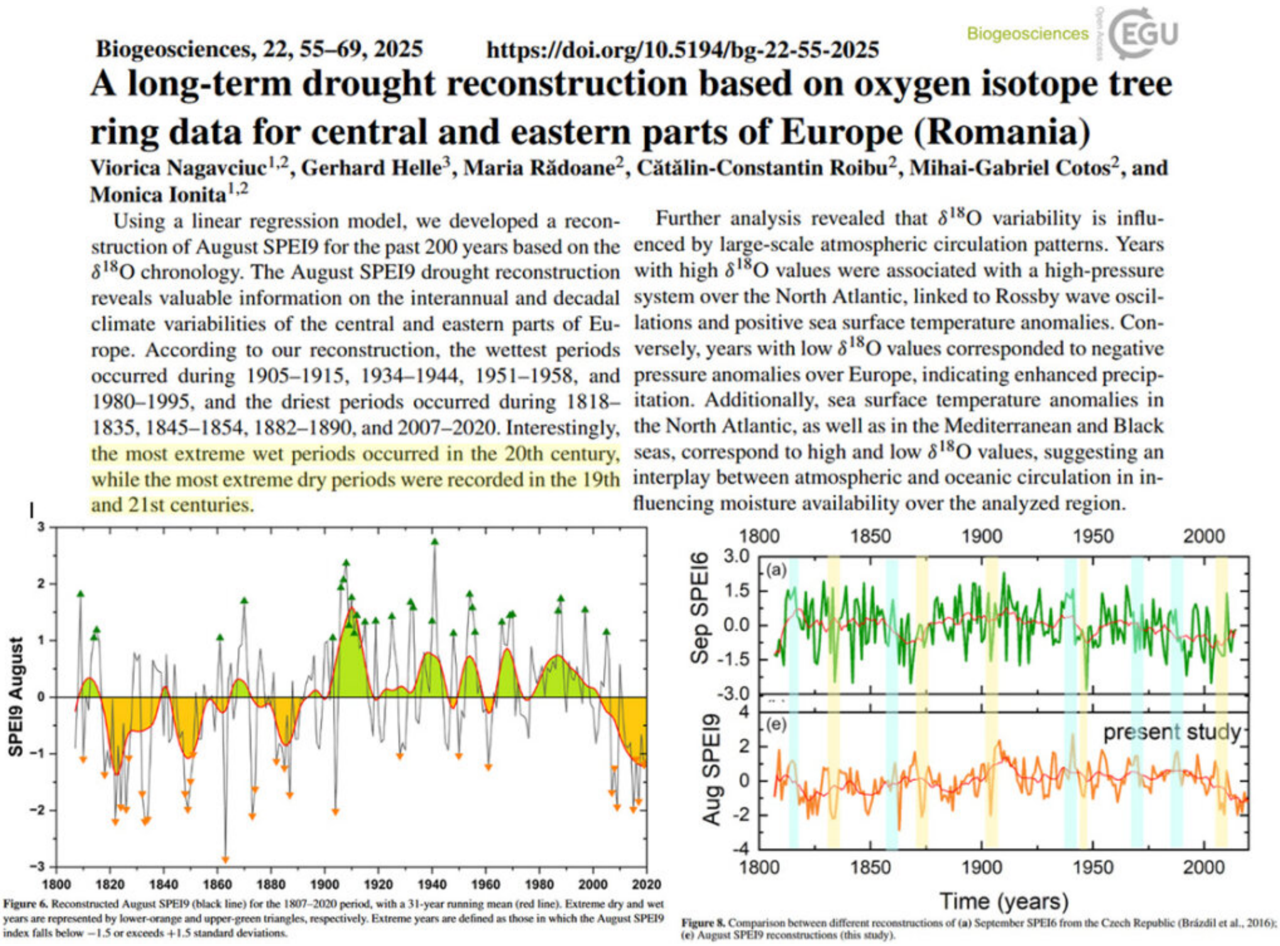
It is intriguing to observe that the relatively "warm period" of the study area on the centennial timescale is clearly different from the notion of a "cool period" (Little Ice Age) during this time, with the T_{min} of the half-year wintertime in the research region during 1650–1750 being superior to those of the 20th century by approximately 0.44 °C. Despite being in the Maunder minimum, apparent warming in the 17th century was not an isolated phenomenon, and this has been reported in climate reconstructions using tree rings and ice cores in the Tibetan Plateau region [27,76,77]. The reconstruction findings of the cold season temperature changes in the northeastern Qinghai–Tibet Plateau using alkene ketone also indicate that the chilly seasons of the Little Ice Age were not the coldest periods, aligning with the findings of this research [78]. This phenomenon is not unique to some regions of the Tibetan Plateau, but also occurred in North America across the ocean [25,79,80].

Figure 4. (**a**) Comparison of four reconstruction results; (**b**) the constructed and observed temperatures during the calibration period of 1960–2016; and (**c**) the average minimum temperatures for the winter months reconstructed using the chronological data ranging from 1606 to 2016. The red line shows the moving average for 11 years, while the horizontal line signifies the average temperature across the entire reconstructed timeline.

Image Source: Jiang et al., 2024

Eine neue Rekonstruktion der Niederschläge in Mitteleuropa für den Zeitraum 1803-2020 (Nagavciuc et al., 2025) zeigt, dass Dürren in den 1800er Jahren länger und ausgeprägter waren als in den 1900er Jahren, waren doch die 1900er Jahre relativ nass. Nur in einem der jüngsten Zeiträume (2007-2020) herrschte eine extreme Dürre, die jedoch nicht die Schwere der Dürrejahre 1818-1835, 1845-1854 und 1882-1890 übertraf.

„Interessanterweise traten die extremsten Regenperioden im 20. Jahrhundert auf, während die extremsten Trockenperioden im 19. und 21. Jahrhundert verzeichnet worden sind.“



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A long-term drought reconstruction based on oxygen isotope tree ring data for central and eastern parts of Europe (Romania)

Viorica Nagavciuc[1,2], Gerhard Helle[3], Maria Rădoane[2], Cătălin-Constantin Roibu[2], Mihai-Gabriel Cotos[2], and Monica Ionita[1,2]

Using a linear regression model, we developed a reconstruction of August SPEI9 for the past 200 years based on the $\delta^{18}O$ chronology. The August SPEI9 drought reconstruction reveals valuable information on the interannual and decadal climate variabilities of the central and eastern parts of Europe. According to our reconstruction, the wettest periods occurred during 1905–1915, 1934–1944, 1951–1958, and 1980–1995, and the driest periods occurred during 1818–1835, 1845–1854, 1882–1890, and 2007–2020. Interestingly, the most extreme wet periods occurred in the 20th century, while the most extreme dry periods were recorded in the 19th and 21st centuries.

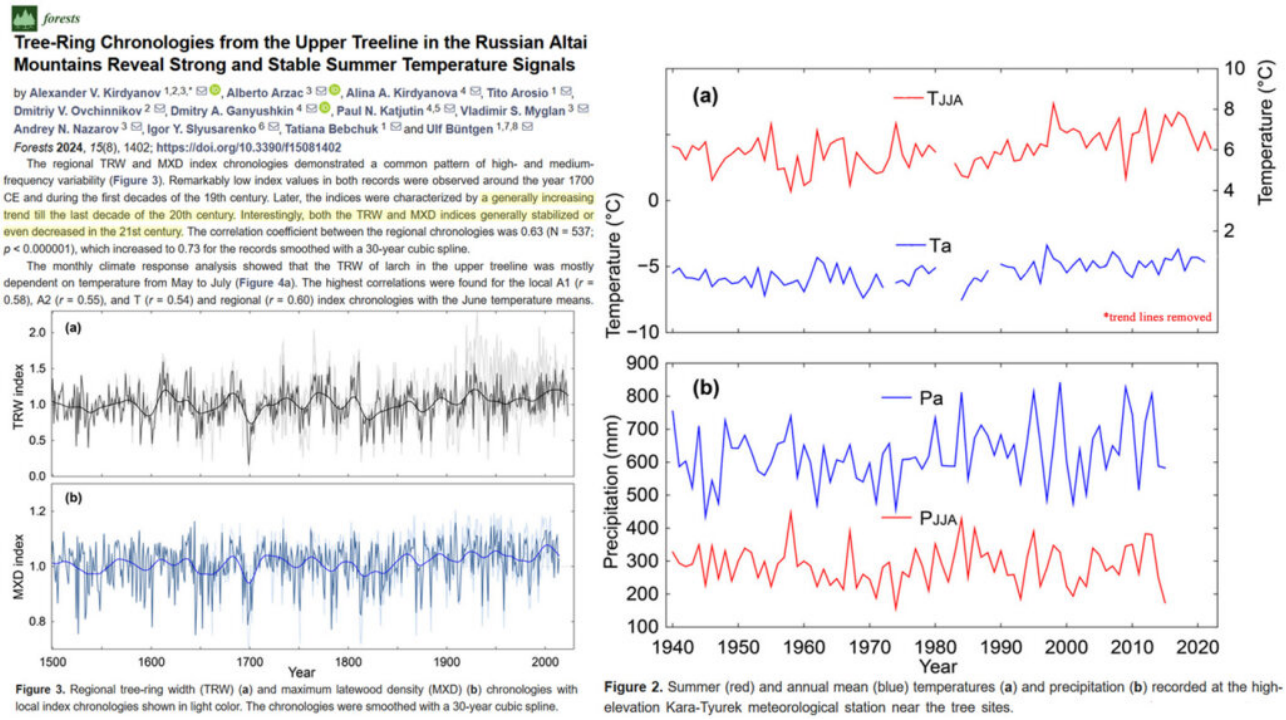
Further analysis revealed that $\delta^{18}O$ variability is influenced by large-scale atmospheric circulation patterns. Years with high $\delta^{18}O$ values were associated with a high-pressure system over the North Atlantic, linked to Rossby wave oscillations and positive sea surface temperature anomalies. Conversely, years with low $\delta^{18}O$ values corresponded to negative pressure anomalies over Europe, indicating enhanced precipitation. Additionally, sea surface temperature anomalies in the North Atlantic, as well as in the Mediterranean and Black seas, correspond to high and low $\delta^{18}O$ values, suggesting an interplay between atmospheric and oceanic circulation in influencing moisture availability over the analyzed region.

Figure 6. Reconstructed August SPEI9 (black line) for the 1807–2020 period, with a 31-year running mean (red line). Extreme dry and wet years are represented by lower-orange and upper-green triangles, respectively. Extreme years are defined as those in which the August SPEI9 index falls below −1.5 or exceeds +1.5 standard deviations.

Figure 8. Comparison between different reconstructions of (a) September SPEI6 from the Czech Republic (Brázdil et al., 2016); (e) August SPEI9 reconstructions (this study).

Image Source: Nagavciuc et al., 2025

Schließlich deutet eine weitere neue Niederschlags- und Temperatur-Rekonstruktion (Kirdyanov et al., 2024) aus dem russischen Altai-Gebirge auf „stabile sommerliche Temperatursignale“ seit den 1500er Jahren hin, ohne offensichtliche Trendänderungen, die außerhalb des langfristigen Durchschnitts liegen.


forests

Tree-Ring Chronologies from the Upper Treeline in the Russian Altai Mountains Reveal Strong and Stable Summer Temperature Signals

by Alexander V. Kirdyanov [1,2,3,*], Alberto Arzac [3], Alina A. Kirdyanova [4], Tito Arosio [1], Dmitriy V. Ovchinnikov [2], Dmitry A. Ganyushkin [4], Paul N. Katjutin [4,5], Vladimir S. Myglan [3] Andrey N. Nazarov [3], Igor Y. Slyusarenko [6], Tatiana Bebchuk [1] and Ulf Büntgen [1,7,8]

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The regional TRW and MXD index chronologies demonstrated a common pattern of high- and medium-frequency variability (Figure 3). Remarkably low index values in both records were observed around the year 1700 CE and during the first decades of the 19th century. Later, the indices were characterized by a generally increasing trend till the last decade of the 20th century. Interestingly, both the TRW and MXD indices generally stabilized or even decreased in the 21st century. The correlation coefficient between the regional chronologies was 0.63 (N = 537; $p < 0.000001$), which increased to 0.73 for the records smoothed with a 30-year cubic spline.

The monthly climate response analysis showed that the TRW of larch in the upper treeline was mostly dependent on temperature from May to July (Figure 4a). The highest correlations were found for the local A1 ($r = 0.58$), A2 ($r = 0.55$), and T ($r = 0.54$) and regional ($r = 0.60$) index chronologies with the June temperature means.

Figure 3. Regional tree-ring width (TRW) (**a**) and maximum latewood density (MXD) (**b**) chronologies with local index chronologies shown in light color. The chronologies were smoothed with a 30-year cubic spline.

Figure 2. Summer (red) and annual mean (blue) temperatures (**a**) and precipitation (**b**) recorded at the high-elevation Kara-Tyurek meteorological station near the tree sites.

Image Source: [Kirdyanov et al., 2024]

Link:
https://notrickszone.com/2025/01/13/3-more-new-drought-and-temperature-reconstructions-do-not-support-the-climate-alarm-narrative/

Übersetzt von Christian Freuer für das EIKE