

# List of Publications Prof. Jürg Luterbacher, PhD

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## Publications

Google Scholar (access/ 1 June 2026)

Citation indices	All	Since 2021
Citations	46136	16190
h-index	105	62
i10-index	273	211

Clarivate ISI Web of Knowledge; number of peer reviewed publications  
(without proceedings): 241, h-index: 81; sum of times cited: >25500

2024: Highly ranked scholar, placed in the top 0.05% of all scholars worldwide,  
ranked #61 in Europe (ScholarGPS)

2024: Leader award in Environmental Sciences in Germany (Research.com)

2025/2026: Highly ranked scholar in Environmental Sciences, ranked #214 in the  
world, nation ranked #13 (Research.com)

Reuters world's top 1000 climate scientists

## Peer-reviewed Scientific Papers; accepted, in press

**Luterbacher, J.**, Xoplaki, E., Luther, N., Ma, S., Haupt, M., Argiriou, A.A., Yang, B., Qin, C., Zhou, T., Li, X., Bello, D.A., and di Cosmo, N., 2026: The Ordos region in the instrumental record and large-scale influences. In *The Great Wall of China as a Climate Frontier: Environmental, Climatic and Historical Perspectives on the Ordos Region* (Eds, Di Cosmo, Bello, Xoplaki and Luterbacher), Springer Nature. In press.

Xoplaki, E., et al. including **Luterbacher, J.** 2026: Paleoclimatic Evidence across the Ordos Region and Yellow River Loop. In *The Great Wall of China as a Climate Frontier: Environmental, Climatic and Historical Perspectives on the Ordos Region* (Eds, Di Cosmo, Bello, Xoplaki and Luterbacher), Springer Nature. In press.

Kempf, M., Depaermentier, M.L.C., **Luterbacher, J.**, and Xoplaki, E., 2026: Environmental vulnerability and landscape suitability models for the Greater Ordos region. In *The Great Wall of China as a Climate Frontier: Environmental, Climatic and Historical Perspectives on the Ordos Region* (Eds, Di Cosmo, Bello, Xoplaki and Luterbacher), Springer Nature. In press.

Di Cosmo, N., Xoplaki, E., and **Luterbacher, J.**, 2026: The Ordos Frontier in the Late First Millennium BCE: Interactions Between Climatic and Historical Dynamics. In *The Great Wall of China as a Climate Frontier: Environmental, Climatic and Historical Perspectives on the Ordos Region* (Eds, Di Cosmo, Bello, Xoplaki and Luterbacher), Springer Nature. In press

Di Cosmo, N., Bello, D., Xoplaki, E., and **Luterbacher, J.**, 2026: The Greater Ordos Region as a Unit of Analysis in Climate History Research. In *The Great Wall of China as a Climate Frontier: Environmental, Climatic and Historical Perspectives on the Ordos Region* (Eds, Di Cosmo, Bello, Xoplaki and Luterbacher), Springer Nature. In press.

Albayrak, A., et al., including **Luterbacher, J.**, 2026: Converting Raw Data into Actionable Information: A Topical Review of AI, Machine Learning, and Digital Twins in Disaster Management. *IEEE Geosci. and Remote Sens. Mag.* In press.

Nan, Q., Chen, S., Huang, L., Chen, J., **Luterbacher, J.**, and Meadows, M.E. 2026: Reassessing the global statistical significance of the 4.2 ka and 8.2 ka events from a spatial heterogeneity perspective. *Sci. Bull.*, accepted.

## Peer-reviewed Papers, revised, in revision, in review, submitted, in prep

- Kempf, M., Depaermentier, M. L. C., Gerling, C., Schwarz, P.-A., Krusic, P., Büntgen, U., **Luterbacher, J.**, and Fleitmann, D., 2026: Environmental cluster models to explore micro-scale strontium isotope variability. *Quat. Sci. Rev.*, revised.
- Duan, J., Hao, F., Zhou, Y., Chen S., Wang, A., Xiao, C., Ljungqvist, F.C., Dong, B., **Luterbacher, J.**, Stott, P.A., and Xoplaki, E., 2026: Recent globally synchronous seasonal warm events unprecedented since 850 CE. *Nat. Comm.*, revised.
- Zhang, J., Chen, W., Kong, Y., **Luterbacher, J.**, Schneider, L., Ljungqvist, F.C. Dai, A., Xoplaki, E., Hao, F., Wang, Z., Wang, A., Moore, J.C., and Duan, J., 2026: Intensifying anthropogenic modification on volcanic cooling. *Nat. Geosci.*, in revision.
- Wang, F., et al., including **Luterbacher, J.**, 2026: Greenhouse Gas–Driven Evolution of Carbonate Weathering Carbon Sinks in Global Carbonate Regions: Historical Attribution and Future Response. *Nat. Comm.*, in revision.
- Lu, R., et al., including **Luterbacher, J.**, 2026: Meeting the Paris target by global carbon pricing. *iScience*, in revision.
- Schumann, G., **Luterbacher, J.**, et al. 2026: The Earth–Brain–Health Commission (EBHC) Report. *Nat. Mental Health*, in revision
- Man, K., Li, X., **Luterbacher, J.**, Yuan, N., Geng, L., Hou, Y., Wang, Y., and Miao, Y., 2026: Impact of tropical oceans on dipole-like surface mass balance trends in West Antarctica. *J. Climate*, in review.
- Wang, Y., Wang, R., et al. including **Luterbacher, J.** 2026: Transfer of carbon tax revenue bridges the gap of investment in renewable energy to meet the Paris Agreement targets. in review.
- Su, Y., Chen, S., Feng, M., Sheng, Y., Zhao, G., Sui, Y., Ma, S., **Luterbacher, J.**, Chen, F., and Li, X., 2026: The paradox of water management in West Asia: reservoir construction accelerates natural lake decline. *iScience*, in review.

- Kempf, M., **Luterbacher, J.**, Petrik, J., Büntgen, U., Bickle, P., Kreiter, A., Xoplaki, E., and Depaermentier, M.L.C., 2026: Adaptive connectivity networks across climatic and ecological regimes from the Neolithic to the Hungarian Conquest period in the Carpathian Basin. *Quat. Sci. Rev.*, in review.
- Martin-Puertas, C., et al. including **Luterbacher, J.**, 2026: Making Palaeoclimatology Research Policy-Relevant: Insights 2 and experience from the DECADAL Project. *J. Quat. Sci.*, in review.
- Xing, X., Wang, R., Ciais, P., Penuelas, J., Makowski, D., Odorico, P., Johansson, D., Xoplaki, E., Sardans, J., Tanaka, K., Janssens, I.A., **Luterbacher, J.**, Cao, J., Wang, Y., Xu, S., Xiong, Y., Wu, Y., Wang, L., Chen, J., Tang, X., and Zhang, R., 2026: Achieving negative emissions in China's agricultural sector. in review.
- Braun, C., Ehmele, F., Beier, C., Espitia-Sarmiento, E.F., Feldmann, H., Frisius, T., Geyer, B., Hundhausen, M., Keuler, K., **Luterbacher, J.**, Sieck, K., Trachte, K., Xoplaki, E., and Pinto, J.G., 2026: NUKLEUS - A first kilometer-scale convection-permitting multi-model climate ensemble for Germany: Characteristics of the historical simulations. in review.
- Hartmann, E., Wagner, S., **Luterbacher, J.**, and Xoplaki, E., 2026: Climatic Impacts of the 536 and 540 CE Volcanic Eruptions Simulated with COSMO-CLM over the Middle East and Africa. *Clim. Past. Disc.* in review.
- Nan, L., Wang, R., Wang, Y., Santos, C.D., Santangeli, A., Eigenbrod, F., Franco, A.M.A., Penuelas, J., Sánchez-Zapata, J.A., Sardans, J., Dunnett, S., D'Odorico, P., Ciais, P., Janssens-Maenhout, G., Xoplaki, E., Cao, J., **Luterbacher, J.**, Chen, J., Tang, X., Wang, L., Xing, X., Xing, X., Han, G., and Zhang, R., 2026: Accelerating global renewable energy transitions is beneficial to the abundance of terrestrial birds. *One Earth*, in review.
- Baumann, M., et. al. including **Luterbacher, J.**, 2026: Added value of a multi-model ensemble of convection-permitting climate model simulations for assessing present-day climate variability and extremes in Germany. submitted.
- Fan, X., Hao, Z., Wu, C., Wang, J., **Luterbacher, J.**, Ljungqvist, F.C., Skoglund, M., and Ge, Q., 2026: Extreme precipitation and cascading socio-ecological crises in late Qing China. submitted.

Luther, N., Zorita, E., **Luterbacher, J.**, and Xoplaki, E., 2026: Asymmetric ENSO impacts on European climate extremes. in prep

Hao, S., **Luterbacher, J.**, et al., and Chen, F.H., 2026: Climate models underestimate the spatial heterogeneity of Holocene temperature changes, in prep.

Hartmann, E., Newfield, T., **Luterbacher, J.**, Wagner, S., Izdebski, A. and Xoplaki, E., 2026: Modelling Mystery: The 536-540 Volcanic Cluster and its Impact on Climate in the Eastern Mediterranean and North Africa. In prep.

Petřík, J. et al., including **Luterbacher, J.** 2026: Hydroclimatic instability and local environmental reorganisation during the Mesolithic–Neolithic transition in the northern Pannonian Basin. In prep.

Zhang, L., Xoplaki, E., Hartmann, E., Wagner, S., **Luterbacher, J.**, and Hao, Z., 2026: Volcanically forced hydroclimatic reorganization in eastern China during the Ming–Qing transition from high-resolution regional climate simulations. In prep.

Cosmin Madalin Marina, C.M., Pérez-Aracil, J., McAdam, R., **Luterbacher, J.**, Scoccimarro, E., Xoplaki, E., and Salcedo-Sanz, S., 2026: Deep Learning Meets Climate Anomalies: SHAP-Based Interpretation of Heatwave Reconstructions with Autoencoders. In prep

## Peer-reviewed Scientific Papers, Published

### 2026

Chen, F., **Luterbacher, J.**, Meadows, M., Ai, L., and Hou, J., 2026: Global Platform ATES: Interdisciplinary Insights into Past Human-Environment Dynamics along the Silk Road. *Sci. Bull.*, **71**, 28-31, doi: 10.1016/j.scib.2025.08.030.

Skrynyk, O., **Luterbacher, J.**, Allan, R., Sidenko, V., Saloid, K., Pinchuk, D., Xoplaki, E., Skrynyk, OI, and Osadchyi, V., 2026: Early Instrumental Weather Observations From Ukraine: The ClimUAsd-Stn.v2 Dataset, 1808-1880. *Geosci. Data J.*, **13**:e70050, <https://doi.org/10.1002/gdj3.70050>

Marina, C.M., Perez-Aracil, J., Lorente-Ramos, E., Xoplaki, E., Zorita, E., McAdam, R., Scoccimarro, E., **Luterbacher, J.**, and Salcedo-Sanz, S., 2026: Detection and attribution of Heat Waves with the Multivariate Autoencoder Flow-Analogue Method (MvAE-AM). *Atmos. Res.*, **328**, 108409, <https://doi.org/10.1016/j.atmosres.2025.108409>

Otero, N., Pelivan, I., Kuglitsch, M., **Luterbacher, J.**, Fitoz, B., and Ma, J., 2026: Advancing Early Warning Systems: Opportunities and Challenges of AI integration. *Environ. Res. Lett.*, **21**, 083005. DOI 10.1088/1748-9326/ae5f7f

### 2025

Kempf, M., Depaermentier, M.L.C., Spengler III, R.N., Frachetti, M.D., Chen, F., **Luterbacher, J.**, Xoplaki, E., and Büntgen, U. 2025: Hydroclimatic instability accelerated the socio-political decline of the Tang Dynasty in northern China. *Njp Commun. Earth Environ.* **6**:1003, <https://doi.org/10.1038/s43247-025-03038-x>.

Xoplaki, E., Ellsäßer, F., Grieger, J., Nissen, K. M., Pinto, J., Augenstein, M., Chen, T.-C., Feldmann, H., Friederichs, P., Gliksman, D., Goulier, L., Haustein, K., Heinke, J., Jach, L., Knutzen, F., Kollet, S., **Luterbacher, J.**, Luther, N., Mohr, S., Mudersbach, C., Müller, C., Rousi, E., Simon, F., Suarez-Gutierrez, L., Szemkus, S., Vallejo-Bernal, S. M., Vlachopoulos, O., and Wolf, F., 2025: Compound events in Germany in 2018: drivers and case studies. *Nat. Hazards Earth Syst. Sci.*, **25**, 541–564, <https://doi.org/10.5194/nhess-25-541-2025>

- Stathakopoulos, D. et al. including **Luterbacher, J.** 2025: The First Plague Pandemic in the Byzantine Empire – Towards a New Dynamic Consensus. *Human Ecol.*  
<https://doi.org/10.1007/s10745-025-00612-x>
- Lappalainen, H.K., et al., including **Luterbacher, J.**, 2025: Towards a Global Ground-Based Earth Observatory (GGBEO): Leveraging Existing Systems and Networks. *Big Earth Data.*, **9**, 615–650. DOI: 10.1080/20964471.2025.2574174
- Hartmann, E., Zhang, M., Wagner, S., Adakudlu, M., **Luterbacher, J.**, and Xoplaki, E., 2025: Implementing External Climate Forcings into the COSMO-CLM 5.0 - A Sensitivity Study around the Samalas Volcanic Eruption in the Eastern Mediterranean / Middle East. *Clim. Past*, **21**, 1699–1724.
- Perez-Aracil, J., et al. including **Luterbacher, J.** 2025: Identifying Key Drivers of Heatwaves: A Novel Spatio-Temporal Framework for Extreme Event Detection. *Wea. and Clim. Extremes*, **49**, 100792.
- Behr, L., Xoplaki, E., Luther, N., Josey, S., and **Luterbacher, J.**, 2025: Atmospheric patterns drive marine heatwaves in the North Atlantic and Mediterranean Sea during summer 2023. *Env. Res. Lett.*, **20**, 104020, DOI 10.1088/1748-9326/ae0055
- Nan, Q., Chen, S., Liu, X., Ma, S., Sun, Y, Huang, L., Chen, J., **Luterbacher, J.**, Meadows, M.E., and Chen, F., 2025: The 4.2 ka Event in the Northern Hemisphere: Spatial Heterogeneity and Driving Mechanisms of Hydroclimatic Change. *Earth Sci. Rev.*, **265**, 105128.
- Leippold, M., et al. including **Luterbacher, J.**, 2025: Automated Fact-Checking of Climate Claims with Large Language Models. *npj Clim. Action*, **4**, 17.  
<https://doi.org/10.1038/s44168-025-00215-8>
- Pechlivanidis, I.G., et al. including **Luterbacher, J.**, 2025: Enhancing Hydrological Forecasting through Strategic Innovations: Value Across Scales and Horizons. *Bull. Amer. Met. Soc. (BAMS)*. **106**, E894–E919, <https://doi.org/10.1175/BAMS-D-24-0322.1>
- Ma, S., et al. including **Luterbacher, J.**, 2025: The Holocene precipitation dipole pattern in the Asian drylands: mechanisms and processes from PMIP4 simulations and paleo-proxy evidence. *Quat. Sci. Rev.*, **347**, 109091

Qin, C., Yang, B., Bräuning, A., Ljungqvist, F., Osborn, T., Shishov, V., He, M., Kang, S., Schneider, L., Esper, J., Buentgen, U., Griessinger, J., Huang, D., Zhang, P., Talento, S., Xoplaki, E., **Luterbacher, J.**, and Stenseth, N.C., 2025: Persistent humid climate favored the Qin and Western Han Dynasties in China around 2200 years ago. *Proc. Natl. Acad. Sci. U.S.A.*, **122**, e2415294121, <https://doi.org/10.1073/pnas.2415294121>

Man, K., **Luterbacher, J.**, Cai, W., Holland, D., Yuan, N., Liu, Y., Geng, L., Hou, Y., Shi, G., Hou, Y., and Li, X., 2025: Century-long west Antarctic snow accumulation changes induced by tropical Teleconnection. in review. *Sci. Adv.*, **11**, eadr2821

## 2024

Kuglitsch, M.M., Cox, J., **Luterbacher, J.**, Jamoussi, B., Xoplaki, E., Thummarukudy, M., Radwan, G.S., Yasukawa, S., McClain, S., Albayrak, A., Oehmen, D., and Ward, T. 2024: AI to the rescue: enhance disaster warnings with tech tools. *Nature*, **634**, 27-29, doi: <https://doi.org/10.1038/d41586-024-03149-z>

Schumann, G., et al., including **Luterbacher, J.**, 2024: The Nature Commission on environment, brain and mental health (Earth Brain Health Commission). *Nat. Mental Health*, **2**, 1121–1123, <https://doi.org/10.1038/s44220-024-00314-1>.

**Luterbacher, J.**, Allan, R., Wilkinson, C., Hawkins, E., Teleti, P., Lorrey, D., Brönnimann, S., Hechler, P., Velikou, K., and Xoplaki, E., 2024: The importance and scientific value of long weather and climate records; the example of global historical marine data. *Climate*, **12**, 39; <https://doi.org/10.3390/cli12030039>

Muccione, V., et al. including **Luterbacher, J.**, 2024: Integrating artificial intelligence with expert knowledge in global environmental assessments: opportunities, challenges and the way ahead. *Reg. Environ. Change*, **24**, 121, <https://doi.org/10.1007/s10113-024-02283-8>

**Luterbacher, J.**, Xoplaki, E., Fleitmann, D., and Izdebski, A., 2024: Palaeoclimatology of Byzantine Lands (AD 300–1500). In: *The Brill Companion to the Environmental History of Byzantium*, edited by Adam Izdebski and Johannes Preiser-Kapeller. Leiden: Brill, Vol. 13, 27–58

Stevens, B., et al., including **Luterbacher, J.**, 2024: Earth Virtualization Engines (EVE). *Earth Syst. Sci. Data.*, **16**, 2113–2122

Govett, M., et al. including **Luterbacher, J.**, 2024: Exascale Computing and Data Handling: Challenges and Opportunities for Weather and Climate Prediction. *Bull. Amer. Met. Soc. (BAMS)*, **105**, E2385–E2404

Newfield, T.P., Roberts, N., Xoplaki, E., et al. including **Luterbacher, J.**, 2024: *Proxies for Plague? New Approaches in Studying the Causes and Consequences of the First Plague Pandemic*, in W. Brandes, H. Reimitz, J. Tannous eds., *Legal Pluralism and Social Change in Late Antiquity and the Middle Ages: A Conference in Honor of John Haldon* (Klostermann, Frankfurt), 63-115

Not peer reviewed:

Pappenberger, F., Wedi, N., Chantry, M., Lessig, C., Lang, S., Deuben, P., Clare, M., Magnusson, L., Gascón, E., Rabier, F., McGovern, A., Maléki Badjana, H., de Burgh-Day, C., **Luterbacher, J.**, Kuglitsch, M.M., and Cloke, H.L. 2024: Artificial intelligence and machine learning: revolutionizing weather forecasting. In: Stuart, L., Pusch, C., Bhasin, I. and Gallo, I. (eds.) *United in Science 2024*. World Meteorological Organization, pp. 16-21. <https://library.wmo.int/records/item/69018-united-in-science-2024>

## 2023

Kuglitsch, M.M., Albayrak, A., **Luterbacher, J.**, Craddock, A., Toreti, A., Ma, J., Padrino Vilela, P., Xoplaki, E., Kotani, R., and Berod, D. 2023: When it comes to Earth observations in AI for disaster risk reduction, is it feast or famine? A topical review. *Environ. Res. Lett.*, **18**, DOI: 10.1088/1748-9326/acf601

Wang, J., Yang, B., Wang, Z., **Luterbacher, J.**, and Ljungqvist, F.C., 2023: Recent weakening of seasonal temperature difference in East Asia beyond the historical range of variability since the 14th century. *Sci. China Earth Sci.*, **66**, 1133–1146, <https://doi.org/10.1007/s11430-022-1066-5>.

Naumann, G., Podestá, G., Marengo, J., **Luterbacher, J.**, Bavera D., Acosta Navarro, J., Arias Muñoz, C., Barbosa, P., Cammalleri, C., Cuartas, A., de Estrada, M., de Felice M., de Jager, A., Escobar, C., Fioravanti, G., Giordano, Harst Essenfelder, A., L., Hidalgo, C., Leal de Moraes, O., Maetens, W., Magni, D., Masante, D., Mazzeschi, Osman, M., Rossi L., M., Seluchi, M., Skansi, M. M., Spennemann, P., Spinoni, J., Toreti., A, Vera, C., 2023: Extreme and long-term drought in the La Plata Basin: event evolution and impact assessment until September 2022, Publications Office of the European Union, Luxembourg, doi:10.2760/62557, JRC132245

## 2022

Zaitchik, B.F., Omumbo, J., Lowe, R., van Aalst, M., Anderson, L.O., Fischer, E., Norman, C., Robbins, J., Barciela, R., Trtanj, J., von Borries, R., and **Luterbacher, J.**, 2022: Planning for compound hazards during the COVID-19 pandemic: the role of climate information systems. *Bull. Americ. Met. Soc.*, **103**, E704-E709

Hermanson, L., et al. (including **Luterbacher, J.**), 2022: WMO Global Annual to Decadal Climate Update: A prediction for 2021-2025. *Bull. Americ. Met. Soc.*, **103**, E1117-E1129

Jaume-Santero, F., Barriopedro, D., García-Herrera, R., and **Luterbacher, J.**, 2022: Monthly North Atlantic Sea Level Pressure Reconstruction Back to 1750 CE Using Artificial Intelligence Optimization. *J. Climate*, **35**, 3395-3410

Behr, L., Luther, N., Josey, S.A., **Luterbacher, J.**, Wagner, S., and Xoplaki, E., 2022: On the representation of Mediterranean Overflow Waters in Global Climate Models. *J. Phys. Ocean.*, **52**, 1397–1413

Yuan, N., Xiong, F., Xoplaki, E., He, W., and **Luterbacher, J.**, 2022: A new approach to correct the overestimated persistence in tree-ring width based precipitation reconstructions. *Clim. Dynam.*, **58**, 2681–2692

Logothetis, I., Dafka, S., Tourpali, K., Misios, S., Zanis, P., Xoplaki, E., **Luterbacher, J.**, and Papagianoulis, E., 2022: Connection between ENSO episodes, Indian Summer

Monsoon and the Eastern Mediterranean atmospheric circulation in CMIP5 simulations over the 20th century. *Int. J. Climatol.*, **42**, 4893-4908

Yang, B., et al. including **Luterbacher, J.**, 2022: Reply to Weiss: Tree-ring stable oxygen isotopes suggest an increase in Asian monsoon rainfall at 4.2 ka BP. *PNAS*, **119**, e2204067119

Seibert, R., Andresen, L.C., Jarosch, K.A., Moser, G., Kammann, C.I., Yuan, N., **Luterbacher, J.**, Laughlin, R.L., Watson, C., Erbs, M., and Müller, C., 2022: Plant functional groups differ in their long-term nutrient response to eCO<sub>2</sub> in an extensive grassland. *Ecosystems*, **25**, 1084–1095

Izdebski, A., Bloomfield, K., Eastwood, W.J., Fernandes, R., Fleitmann, D., Guzowski, P., Haldon, J., Ludlow, F., **Luterbacher, J.**, Manning, J., Masi, A., Mordechai, L., Newfield, T., Stine, A., Şenkul, C., and Xoplaki, E., 2022: The emergence of interdisciplinary environmental history: bridging the gap between the humanistic and scientific approaches to the Late Holocene. *Annales: Histoire, Sciences Sociales*, **77**, 11-88; <http://hdl.handle.net/21.11116/0000-000A-B19D-D>

## 2021

Xoplaki, E., **Luterbacher, J.**, Luther, N., Behr, L., Wagner, S., Jungclaus, J., Zorita, E., Toreti, A., Fleitmann, D., Izdebski, A., Bloomfield, K., 2021: Hydrological Changes in Late Antiquity: Spatio-Temporal Characteristics and Socio-Economic Impacts in the Eastern Mediterranean. In: Erdkamp P., Manning J.G., Verboven K. (eds) *Climate Change and Ancient Societies in Europe and the Near East*. Palgrave Studies in Ancient Economies. Palgrave Macmillan, Cham. [https://doi.org/10.1007/978-3-030-81103-7\\_18](https://doi.org/10.1007/978-3-030-81103-7_18), pp 533-560

Yang, B., et al., including **Luterbacher, J.**, 2021: Long-term decrease in Asian monsoon rainfall and abrupt climate change events over the past 6,700 years. *PNAS*, **118**, e2102007118

Bundo, M., de Schrijver, E., Federspiel, A., Toreti, A., Xoplaki, E., **Luterbacher, J.**, Franco, O.H., Müller, T., and Vicedo-Cabrera, M., 2021: Ambient temperature and mental health hospitalizations in Bern, Switzerland: A 45-year time-series study. *PlosOne*, **16**: e0258302

Slivinski, L.C. et al., including **Luterbacher, J.**, 2021: An evaluation of the performance of the 20th Century Reanalysis version 3. *J. Climate*, **34**, 1417–1438

Hernández, A., Cachão, M., Sousa, P., Trigo, R.M., **Luterbacher, J.**, Vaquero, J.M., and Freitas, M.C., 2021: External forcing mechanisms controlling the North Atlantic coastal upwelling regime during the mid-Holocene. *Geology*, **49**, 433-437

Dafka, S., Akritis, D., Zanis, P., Pozzer, A., Xoplaki, E., **Luterbacher, J.**, and Zerefos, C., 2021: On the link between the Etesian winds, tropopause folds and tropospheric ozone over the Eastern Mediterranean during summer. *Atmos. Res.*, **248**, 105161

Skrynyk, O., **Luterbacher, J.**, Allan, R., Boichuk, D., Sidenko, V., Skrynyk, O., Palarz, A., Oshurok, D., Osadchy, V., Xoplaki, E., and Soadchyi, V., 2021: Ukrainian early (pre-1850) historical weather observations. *Geosci. Data J.*, **8**, 55-73

Zhang, M., Tölle, M.H., Hartmann, E., Xoplaki, E., and **Luterbacher, J.**, 2021: A sensitivity assessment of COSMO-CLM to different land cover schemes in convection-permitting climate simulations over EURO-CORDEX. *Atmosphere*, **12**, 1595; <https://doi.org/10.3390/atmos12121595>

Not peer-reviewed 2021 publication:

Naumann, G., Podesta, G., Marengo, J., **Luterbacher, J.**, Bavera, D., Arias Muñoz, C., Barbosa, P., Cammalleri, C., Chamorro, L., Cuartas, A., de Jager, A., Escobar, C., Hidalgo, C., Leal de Moraes, O., McCormick N., Maetens, W., Magni, D., Masante, D., Mazzeschi, M., Seluchi, M., Skansi, M. M., Spinoni, J., Toreti, A. The 2019-2021 extreme drought episode in La Plata Basin, EUR 30833 EN, Publications Office of the European Union, Luxembourg, 2021, ISBN 978-92-76-41898-6 (online), doi:10.2760/773, JRC126508

## 2020

**Luterbacher, J.**, Newfield, T.P., Xoplaki, E. et al., 2020: Past pandemics and climate variability across the Mediterranean. *Euro-Mediterr. J. Environ. Integr.* **5**, 46

- Zaitchik, B.F., Sweijd, N., Shumake-Guillemot, J., **Luterbacher, J.** et al., 2020: A framework for research linking weather, climate and COVID-19. *Nat. Commun.* **11**, 5730.  
<https://doi.org/10.1038/s41467-020-19546-7>
- Ratna, S.B., Osborn, T.J., Joshi, M., and **Luterbacher, J.**, 2020: The influence of Atlantic variability on Asian summer climate is sensitive to the pattern of Sea Surface Temperature anomaly. *J. Climate*, **33**, 7567-7590
- Hartmann, E., Schulz, J-P., Seibert, R., Schmidt, M., Zhang, M., **Luterbacher, J.**, and Tölle, M.H., 2020: Impact of Environmental Conditions on Grass Phenology in the Regional Climate Model COSMO-CLM. *Atmosphere*, **11**, 1364;  
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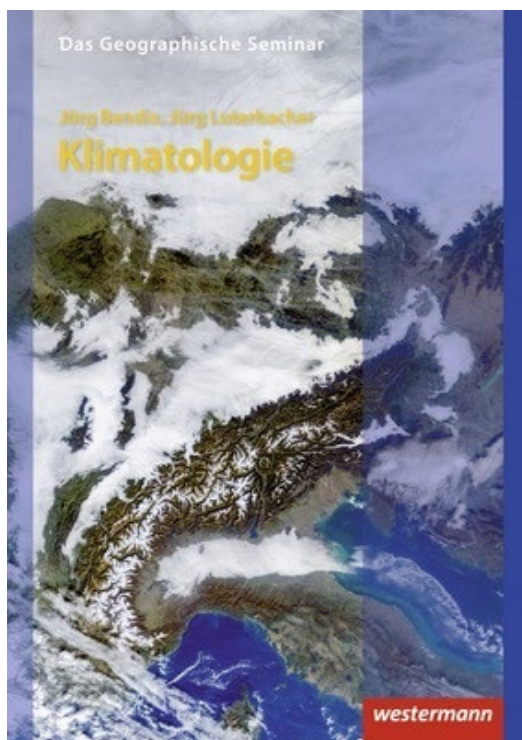
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