

PUBLIKATIONSLISTE

IN REVIEW

Wohland, J., Hoffmann, P., Lima, D. C. A., **Breil, M.**, Asselin, O., and Rechid, D. (2023). Extrapolation is not enough: Impacts of extreme land-use change on wind profiles and wind energy according to regional climate models, *EGUsphere* [preprint], <https://doi.org/10.5194/egusphere-2023-2533>.

PEER REVIEWED

21. **Breil, M.**, Schneider, V. K. M., & Pinto, J. G., (2024). The effect of forest cover changes on the regional climate conditions in Europe during the period 1986–2015, *Biogeosciences*, 21, 811–824, <https://doi.org/10.5194/bg-21-811-2024>.
20. **Breil, M.**, Weber, A., & Pinto, J. G., (2023). The potential of an increased deciduous forest fraction to mitigate the effects of heat extremes in Europe. *Biogeosciences*, 20, 2237–2250.
19. **Breil, M.**, Krawczyk, F., and Pinto, J. G., (2023). The response of the regional longwave radiation balance and climate system in Europe to an idealized afforestation experiment, *Earth Syst. Dynam.*, 14, 243–253.
18. Rousi, E., Fink, A. H., Andersen, L. S., Becker, F. N., Beobide-Arsuaga, G., **Breil, M.**, et al., (2023). The extremely hot and dry 2018 summer in central and northern Europe from a multi-faceted weather and climate perspective. *Natural Hazards and Earth System Sciences*, 23(5), 1699–1718.
17. Daloz, A. S., Schwingshackl, C., Mooney, P., Strada, S., Rechid, D., Davin, E. L., Katragkou, E., de Noblet-Ducoudré, N., Belda, M., Halenka, T., **Breil, M.**, Cardoso, R. M., Hoffmann, P., Lima, D. C. A., Meier, R., Soares, P. M. M., Sofiadis, G., Strandberg, G., Toelle, M. H., & Lund, M. T. (2022). Land–atmosphere interactions in sub-polar and alpine climates in the CORDEX flagship pilot study Land Use and Climate Across Scales (LUCAS) models – Part 1: Evaluation of the snow-albedo effect, *Cryosphere*, 16, 2403–2419, <https://doi.org/10.5194/tc-16-2403-2022>.
16. Mooney, P. A., Rechid, D., Davin, E. L., Katragkou, E., de Noblet-Ducoudré, N., **Breil, M.**, Cardoso, R. M., Daloz, A. S., Hoffmann, P., Lima, D. C. A., Meier, R., Soares, P. M. M., Sofiadis, G., Strada, S., Strandberg, G., Toelle, M. H., & Lund, M. T. (2022). Land-atmosphere interactions in sub-polar and alpine climates in the CORDEX FPS LUCAS models – Part 2: The role of changing vegetation. *Cryosphere*. 16, 1383–1397, <https://doi.org/10.5194/tc-16-1383-2022>.
15. Sofiadis, G., Katragkou, E., Davin, E. L., Rechid, D., de Noblet-Ducoudre, N., **Breil, M.**, Cardoso, R. M., Hoffmann, P., Jach, L. L., Meier, R., Mooney, P., Soares, P. M. M., Strada, S., Tölle, M. H., & Warrach Sagi, K. (2022). Afforestation impact on soil temperature in regional climate model simulations over Europe. *Geoscientific Model Development*, 15(2), 595–616.
14. **Breil, M.**, Christner, E., Cauquoin, A., Werner, M., Karremann, M., and Schädler, G. (2021). Applying an isotope-enabled regional climate model over the Greenland ice sheet: effect of spatial resolution on model bias. *Climate of the Past*, 17(4), 1685–1699., <https://doi.org/10.5194/cp-17-1685-2021>.
13. **Breil, M.**, & Schädler, G. (2021). The reduction of systematic temperature biases in soil moisture-limited regimes by stochastic root depth variations, *Journal of Hydrometeorology*, 22(7), 1897–1911. <https://doi.org/10.1175/JHM-D-20-0265.1>.

12. Schädler, G. & **Breil, M.** (2021). Identification of droughts and heatwaves in Germany with regional climate networks, *Nonlin. Processes Geophys.*, 28, 231–245, <https://doi.org/10.5194/npg-28-231-2021>.
11. **Breil, M.**, Davin, E. L., & Rechid, D. (2021). What determines the sign of the evapotranspiration response to afforestation in European summer? *Biogeosciences*, 18(4), 1499-1510.
10. **Breil, M.**, Rechid, D., Davin, E., de Noblet-Ducoudré, N., Katragkou, E., Cardoso, R.M., Hoffmann, P., Jach, L.L., Soares, P.M.M., Sofiadis, G., Strada, S., Strandberg, G., Tölle, M.H., Warrach-Sagi, K. (2020). The opposing effects of re/af-forestation on the diurnal temperature cycle at the surface and in the lowest atmospheric model level in the European summer. *Journal of Climate*. 1-58. <https://doi.org/10.1175/JCLI-D-19-0624.1>
9. Davin, E. L., Rechid, D., **Breil, M.**, Cardoso, R. M., Coppola, E., Hoffmann, P., Jach, L. L., Katragkou, E., de Noblet-Ducoudré, N., Radtke, K., Raffa, M., Soares, P. M. M., Sofiadis, G., Strada, S., Strandberg, G., Tölle, M. H., Warrach-Sagi, K., Wulfmeyer, V., (2020). Biogeophysical impacts of forestation in Europe: first results from the LUCAS (Land Use and Climate Across Scales) regional climate model intercomparison, *Earth Syst. Dynam.*, 11, 183–200.
8. **Breil, M.**, Laube, N., Pinto, J. G., & Schädler, G., (2019). The Impact of Soil Initialization on Regional Decadal Climate Predictions in Europe. *Climate Research*, 77(2), 139-154.
7. Tölle, M. H., **Breil, M.**, Radtke, K., & Panitz, H. J. (2018). Sensitivity of European temperature to albedo parameterization in the regional climate model COSMO-CLM linked to extreme land use changes. *Frontiers in Environmental Science*, 6, 123.
6. **Breil, M.**, Schädler, G., & Laube, N., (2018). An Improved Soil Moisture Parametrization for Regional Climate Simulations in Europe. *Journal of Geophysical Research: Atmospheres*, 123(14), 7331-7339.
5. **Breil, M.**, Panitz, H.-J. & Schädler, G., (2017). Impact of Soil-Vegetation-Atmosphere Interactions on the Spatial Rainfall Distribution in the Central Sahel. *Meteorol. Z.* doi:10.1127/metz/2017/0819.
4. Will, A., Akhtar, N., Brauch, J., **Breil, M.**, Davin, E., Ho-Hagemann, H.T.M, Maisonnave, E., Thürkow, M., Weiher, S., (2017). The COSMO-CLM 4.8 Regional Climate Model coupled to Regional Ocean, Land Surface and Global Earth System Models using OASIS3-MCT: Description and Performance. *Geoscientific model development*, 10 (4), 1549-1586. doi:10.5194/gmd-10-1549-2017.
3. **Breil, M.**, & Schädler, G., (2017). Quantification of the Uncertainties in Soil and Vegetation Parameterizations for Regional Climate Simulations in Europe. *Journal of Hydrometeorology*, 18 (5), 1535-1548. doi:10.1175/JHM-D-16-0226.1.
2. Paeth, H., Paxian, A., Sein, D., Jacob, D., Panitz, H.-J., Warscher, M., Fink, A.H., Kunstmann, H., **Breil, M.**, Engel, T., Krause, A., Tödter, J., Ahrens, B., (2017). Decadal and multi-year predictability of the West African monsoon and the role of dynamical downscaling. *Meteorol. Z.* doi: 10.1127/metz/2017/0811.
1. Paxian, A., Sein, D., Panitz, H.-J., Warscher, M., **Breil, M.**, Engel, T., Tödter, J., Krause, A., Cabos Narvaez, W.D., Fink, A.H., Ahrens, B., Kunstmann, H., Jacob, D., Paeth, H., (2016). Bias

Reduction in Decadal Predictions of West African Monsoon Rainfall using Regional Climate Models. *J. Geophys. Res. Atmos.*, Vol. 121 (4), pp. 1715-1735.