

## Publications

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### Peer-reviewed

Tamoffo, A. T., **Weber, T.**, Cabos, W., Monerie, P.-A., Cook, K. H., Sein, D.V., Dosio, A., Klutse, N. A. B., Akinsanola, A.A., & Jacob, D. (2024). West African Monsoon System's Responses to Global Ocean–Regional Atmosphere Coupling. *J. Climate*, 37, 4291–4312, <https://doi.org/10.1175/JCLI-D-23-0749.1>

Tamoffo, A.T., **Weber, T.**, Akinsanola, A. A., & Vondou, D. A. (2023). Projected changes in extreme rainfall and temperature events and possible implications for Cameroon's socio-economic sectors. *Meteorol. Appl.*, 30(2), e2119. <https://doi.org/10.1002/met.2119>

Tamoffo, A.T., Akinsanola, A.A. & **Weber, T.** (2023). Understanding the diversity of the West African monsoon system change projected by CORDEX-CORE regional climate models. *Clim Dyn.* <https://doi.org/10.1007/s00382-023-06690-1>

Fotso-Nguemo, T.C., **Weber, T.**, Diedhiou, A., Chouto, S.-C., Vondou, D.A., Rechid, D., & Jacob, D. (2023). Projected impact of increased global warming on heat stress and exposed population over Africa. *Earth's Future*, 11, e2022EF003268. <https://doi.org/10.1029/2022EF003268>

Olmo, M. E., **Weber, T.**, Teichmann, C., & Bettolli, M. L. (2022). Compound events in South America using the CORDEX-CORE ensemble: Current climate conditions and future projections in a global warming scenario. *Journal of Geophysical Research: Atmospheres*, 127, e2022JD037708. <https://doi.org/10.1029/2022JD037708>

Tamoffo, A.T., Dosio, A., Amekudzi, L.K., & **Weber, T.** (2022). Process-oriented evaluation of the West African Monsoon system in CORDEX-CORE regional climate models. *Clim Dyn.* <https://doi.org/10.1007/s00382-022-06502-y>

**Weber, T.**, Cabos, W., Sein, D.V., & Jacob, D. (2022). Benefits of simulating precipitation characteristics over Africa with a regionally-coupled atmosphere–ocean model. *Clim Dyn* <https://doi.org/10.1007/s00382-022-06329-7>

Tamoffo, A.T., Amekudzi, L.K., **Weber, T.**, Vondou, D.A., Yamba, E.I., & Jacob, D. (2022) Mechanisms of Rainfall Biases in two CORDEX-CORE Regional Climate Models at rainfall peaks over Central Equatorial Africa. *J. Climate.*, Vol. 35, Issue 2, <https://doi.org/10.1175/JCLI-D-21-0487.1>

Giorgi, F., Coppola, E., Jacob, D., Teichmann, C., Abba Omar, S., Ashfaq, M., Ban, N., Bülow, K., Bukovsky, M., Bunttemeyer, L., Cavazos, T., Ciarlo, J., da Rocha, R.P., Das, S., di Sante, F., Evans, J.P., Gao, X., Giuliani, G., Glazer, R.H., Hoffmann, P., Im, E., Langendijk, G., Lierhammer, L., Llopart, M., Mueller, S., Luna-Nino, R., Nogherotto, R., Pichelli, E., Raffaele, F., Reboita, M., Rechid, D., Remedio, A., Remke, T., Sawadogo, W., Sieck, K., Torres-Alavez, J.A., & **Weber, T.** (2022). The CORDEX-CORE EXP-I Initiative: Description and Highlight Results from the Initial Analysis, *Bulletin of the American Meteorological Society*, 103(2), E293-E310. Retrieved May 4, 2022, from <https://journals.ametsoc.org/view/journals/bams/103/2/BAMS-D-21-0119.1.xml>

Fotso-Nguemo, T.C., Vondou D.A., Diallo, I., Diedhiou, A., **Weber, T.**, Tanessong, R.S., Nghonda, J.P., & Yepdo, Z.D. (2022). Potential impact of 1.5, 2 and 3 °C global warming levels on heat and discomfort indices changes over Central Africa. *Sci. Total. Environ.*, Vol 804, <https://doi.org/10.1016/j.scitotenv.2021.150099>

Coppola, E., Raffaele, F., Giorgi, F., Giuliani, G., Xuejie, G., Ciarlo, J.M., Sines, T.R., Torres-Alavez, J.A., Das, S., di Sante, F., Pichelli, E., Glazer, R., Müller, S.K., Abba Omar, S., Ashfaq, M., Bukovsky, M., Im, E.-S., Jacob, D., Teichmann, C., Remedio, A., Remke, T., Kriegsmann, A., Bülow, K., **Weber, T.**, Buntemeyer, L., Sieck, K., & Rechid, D. (2021). Climate hazard indices projections based on CORDEX-CORE, CMIP5 and CMIP6 ensemble. *Clim. Dyn.*, 57, 1293–1383. <https://doi.org/10.1007/s00382-021-05640-z>

**Weber, T.**, Bowyer, P., Rechid, D., Pfeifer, S., Raffaele, F., Remedio, A. R., Teichmann, C., & Jacob, D. (2020). Analysis of compound climate extremes and exposed population in Africa under two different emission scenarios. *Earth's Future*, 8, e2019EF001473. <https://doi.org/10.1029/2019EF001473>

Teichmann, C., Jacob, D., Remedio, A.R., Remke, T., Buntemeyer, L., Hoffmann, P., Kriegsmann, A., Lierhammer, L., Bülow, K., **Weber, T.**, Sieck, K., Rechid, D., Langendijk, G.S., Coppola, E., Giorgi, F., Ciarlo, J.M., Raffaele, F., Giuliani, G., Xuejie, G., Sines, T.R., Torres-Alavez, J.A., Das, S., Di Sante, F., Pichelli, E., Glazer, R., Ashfaq, M., Bukovsky, M., & Im, E.-S. (2020). Assessing mean climate change signals in the global CORDEX-CORE ensemble. *Clim. Dyn.*, 57, 1269–1292. <https://doi.org/10.1007/s00382-020-05494-x>

Ciarlo, J.M., Coppola, E., Fantini, A., Giorgi, F., Gao, X., Tong, Y., Glazer, R.H., Alavez, J.A.T., Sines, T., Pichelli, E., Raffaele, F., Das, S., Bukovsky, M., Ashfaq, M., Im, E.-S., Nguyen-Xuan, T., Teichmann, C., Remedio, A., Remke, T., Bülow, K., **Weber, T.**, Buntemeyer, L., Sieck, K., Rechid, D., & Jacob, D. (2020). A new spatially distributed added value index for regional climate models: the EURO-CORDEX and the CORDEX-CORE highest resolution ensembles. *Clim. Dyn.*, 57, 1403–1424. <https://doi.org/10.1007/s00382-020-05400-5>

Remedio, A.R., Teichmann, C., Buntemeyer, L., Sieck, K., **Weber, T.**, Rechid, D., Hoffmann, P., Nam, C., Kotova, L., & Jacob, D. (2019). Evaluation of New CORDEX Simulations Using an Updated Köppen–Trewartha Climate Classification. *Atmosphere*, 10, 726. <https://doi.org/10.3390/atmos10110726>

**Weber, T.**, Haensler, A., Rechid, D., Pfeifer, S., Eggert, B., & Jacob, D. (2018). Analyzing regional climate change in Africa in a 1.5, 2, and 3°C global warming world. *Earth's Future*, 6, 643–655. <https://doi.org/10.1002/2017EF000714>

**Weber, T.**, Haensler, A. & Jacob, D. (2017). Sensitivity of the hydrological cycle to corrections of the sea surface temperature bias over southern Africa in a regional climate model. *Clim. Dyn.* <https://doi.org/10.1007/s00382-017-4052-8>.

**Weber, T.**, Helmschrot, J., Berndt, R., & Jacob, D. (2014). Assessment of climate dynamics in the Okavango region using high-resolution ERA-40 reanalysis data. *Zentralblatt f. Geologie u. Paläontologie, Teil I.*, Jg. 2014 Heft 1, 171-187. doi: 10.1127/zgpl/2014/0171-0187

Saeed, F., Haensler, A., **Weber, T.**, Hagemann, S., & Jacob, D. (2013). Representation of Extreme Precipitation Events Leading to Opposite Climate Change Signals over the Congo Basin. *Atmosphere*, 4, 254-271. <https://doi.org/10.3390/atmos4030254>

Teichmann, C., Eggert, B., Elizalde, A., Haensler, A., Jacob, D., Kumar, P., Moseley, C., Pfeifer, S., Rechid, D., Remedio, A.R., Ries, H., Petersen, J., Preuschmann, S., Raub, T., Saeed, F., Sieck, K., & **Weber, T.** (2013). How Does a Regional Climate Model Modify the Projected Climate Change Signal of the Driving GCM: A Study over Different CORDEX Regions Using REMO. *Atmosphere*, 4, 214-236. <https://doi.org/10.3390/atmos4020214>

**Weber, T.** & Quaas, J. (2012). Incorporating the subgrid-scale variability of clouds in the autoconversion parameterization using a PDF-scheme, *J. Adv. Model. Earth Syst.*, 4, M11003. <https://doi.org/10.1029/2012MS000156>

**Weber, T.**, Quaas, J., & Räisänen, P. (2011). Evaluation of the statistical cloud scheme in ECHAM5 using satellite data. *Q.J.R. Meteorol. Soc.*, 137: 2079–2091. <https://doi.org/10.1002/qj.887>

**Weber, T.** & Névir, P. (2008). Storm tracks and cyclone development using the theoretical concept of the Dynamic State Index (DSI). *Tellus A*, 60, 1–10. <https://doi.org/10.1111/j.1600-0870.2007.00272.x>

### **Book Chapters**

**Weber, T.** (2013): Okavango Basin – Climate. In Oldeland, J., Erb, C., Finckh, M. & N. Jürgens (Eds.), *Environmental Assessments in the Okavango Region. - Biodiversity & Ecology 5.* (pp 15-17). Hamburg, doi: 10.7809/b-e.00237. (ISSN 1613-9801)

**Weber, T.** (2013): Cusseque – Climate. In Oldeland, J., Erb, C., Finckh, M. & N. Jürgens (Eds.), *Environmental Assessments in the Okavango Region. - Biodiversity & Ecology 5.* (pp 45-46). Hamburg, doi: 10.7809/b-e.00243. (ISSN 1613-9801)

**Weber, T.** (2013): Caiundo – Climate. In Oldeland, J., Erb, C., Finckh, M. & N. Jürgens (Eds.), *Environmental Assessments in the Okavango Region. - Biodiversity & Ecology 5.* (pp 85-86). Hamburg, doi: 10.7809/b-e.00253. (ISSN 1613-9801)

**Weber, T.** (2013): Mashare – Climate. In Oldeland, J., Erb, C., Finckh, M. & N. Jürgens (Eds.), *Environmental Assessments in the Okavango Region. - Biodiversity & Ecology 5.* (pp 103-104). Hamburg, doi: 10.7809/b-e.00258. (ISSN 1613-9801)

**Weber, T.** (2013): Seronga – Climate. In Oldeland, J., Erb, C., Finckh, M. & N. Jürgens (Eds.), *Environmental Assessments in the Okavango Region. - Biodiversity & Ecology 5.* (pp 133-134). Hamburg, doi: 10.7809/b-e.00266. (ISSN 1613-9801)

### **Non peer-reviewed**

König, L., Ziegler, K., Abel, D., **Weber, T.**, Teucher, M., Otte, I., Ajayi, V., Gbode, I. E., Zoungrana, B. J., Coulibaly, A., Schuck-Zöller, S., Máñez Costa, M., Paeth, H., Conrad, C. (2024). LANDSURF Decision Support System. <https://doi.org/10.5281/zenodo.13318593>

**Weber, T.**, Gbode, I. E., Ziegler, K., Abel, D., Ajayi, V. O., Otte, I., Zoungrana, B. J.-B., Coulibaly, A., Máñez Costa, M., Guillén Bolaños, T., Muwafu, S. and H. Paeth (2023). Users' interaction protocol to identify specific climate indicators and end-user needs for the development of a decision support system (DSS). WASCAL WRAP2.0: LANDSURF project. <https://zenodo.org/10.5281/zenodo.12744081>

**Weber, T.**, Cortekar, J., Köstner, B., Heidenreich, M., Fischer, B., Rumpf, D., Duchková, H., Plunkte, T. (2021). Transfer of LIFE LOCAL ADAPT Products and Services – Guidance Document. <https://life-local-adapt.eu>

Krönert, T., Pfeifer, S., Sonntag, S. & **Weber, T.** (2020, 28. Dezember). Kombinierte Gefahrenlagen durch den Klimawandel. Earth System Knowledge Platform [eskp.de], 7. doi:10.48440/eskp.055

**Weber, T.**, Kriegsmann, A., Eggert, B. & Jacob, D. (2015). Analysis of Climate Change Projections for the Okavango River Basin. Published in the Okavango Basin Information System (OBIS)

Quaas, J., Grützun, V. Schemann, V. & **Weber, T.** (2012). Evaluating parameterisations of subgrid-scale variability. ECMWF Workshop on Parametrization of Clouds and Precipitation, 5 - 8 November 2012