

EURO-CORDEX overview of activities for 2019

POCs: Daniela Jacob, Claas Teichmann (Climate Service Center Germany GERICS), Stefan Sobolowski (Uni Research Climate-BCCR), Eleni Katragkou (AUTH).

- **Dynamical Downscaling:** Stefan Sobolowski (Uni Research Climate-BCCR), Eleni Katragkou (Aristotle University of Thessaloniki)
- **Climate Information Distillation:** Douglas Maraun (Uni Graz), Andreas Haensler Climate Service Center Germany (GERICS)
- **Statistical Downscaling:** Rasmus Benestad (Norwegian Meteorological Institute), J.M. Gutierrez (University of Cantabria)

Partners:

<http://euro-cordex.net/060379/index.php.en>

Webpage:

<http://euro-cordex.net/>

Publications:

For past Euro-CORDEX publications please look at:

<http://euro-cordex.net/060380/index.php.en>

New EURO-CORDEX member publications in peer review journals - 2019:

1. Berg, P.; Christensen, O. B.; Klehmet, K.; Lenderink, G.; Olsson, J.; Teichmann, C. & Yang, W. Summertime precipitation extremes in a EURO-CORDEX 0.11° ensemble at an hourly resolution, *Natural Hazards and Earth System Sciences*, 2019 , 19 , 957-971 <https://doi.org/10.5194/nhess-19-957-2019>
2. Bülow, K.; Huebener, H.; Keuler, K.; Menz, C.; Pfeifer, S.; Ramthun, H.; Spekat, A.; Steger, C.; Teichmann, C. & Warrach-Sagi, K. User tailored results of a regional climate model ensemble to plan adaptation to the changing climate in Germany *Advances in Science and Research*, 2019 , 16 , 241-249 <https://doi.org/10.5194/asr-16-241-2019>
3. Cardoso, R.M., P.M.M. Soares, D.C.A. Lima and Pedro M.A. Miranda, 2019: Mean and extreme temperatures in a warming climate: EURO CORDEX and WRF regional climate high-resolution projections for Portugal. *Climate Dynamics*, 52, 129-157. doi:10.1007/s00382-018-4124-4
4. Casanueva, A., Kotlarski, S., Herrera, S., Fischer, A. M., Kjellstrom, T., and Schwierz, C.: Climate projections of a multivariate heat stress index: the role of downscaling and bias correction, *Geosci. Model Dev.*, 12, 3419–3438, <https://doi.org/10.5194/gmd-12-3419-2019>, 2019.
5. Fernández J., M. D. Frías, W. D. Cabos, A. S. Cofiño, M. Domínguez, L. Fita, M. A. Gaertner, M. García-Díez, J. M. Gutiérrez, P. Jiménez-Guerrero, G. Liguori, J. P. Montávez, R. Romera, E. Sánchez (2019) Consistency of climate change projections from multiple global and regional model intercomparison projects. *Climate Dynamics* 52:1139-1156 <https://doi.org/10.1007/s00382-018-4181-8>
6. Kotlarski S., P. Szabó, S. Herrera, O. Räty, K. Keuler; P. M. Soares, R.M. Cardoso et al. 2019: Observational uncertainty and regional climate model evaluation: A pan-European perspective. *International Journal of Climatology*, 39(9), 3730–3749. <https://doi.org/10.1002/joc.5249>

7. Nogueira, M., Soares, P.M.M., Tomé, R., Cardoso, R.M., 2019: High-resolution multi-model projections of onshore wind resources over Portugal under a changing climate. *Theoretical and Applied Climatology*, 136(1-2), 347-362.
8. Kämäräinen, M.; Hyvärinen, O.; Vajda, A.; Nikulin, G.; Meijgaard, E. v.; Teichmann, C.; Jacob, D.; Gregow, H. & Jylhä, K., Estimates of Present-Day and Future Climatologies of Freezing Rain in Europe Based on CORDEX Regional Climate Models, *J. Geophys. Res. Atmos.*, John Wiley & Sons, Ltd, 2019 , 123 , 13,291-13,304, <https://doi.org/10.1029/2018jd029131>
9. Langendijk, G.S. Rechid, D. and Jacob, D. (2019) Urban Areas and Urban–Rural Contrasts under Climate Change: What Does the EURO-CORDEX Ensemble Tell Us? Investigating Near Surface Humidity in Berlin and Its Surroundings . *Atmosphere*. 10, 730. <https://doi.org/10.3390/atmos10120730>
10. Pfeifer S, Rechid D, Reuter M, Viktor E, Jacob D (2019): 1.5°, 2°, and 3° global warming: visualizing European regions affected by multiple changes. *Regional Environmental Change* (2019) 19:1777–1786, <https://doi.org/10.1007/s10113-019-01496-6>
11. Zittis, G., Hadjinicolaou, P., Klangidou, M. et al. (2019) A multi-model, multi-scenario, and multi-domain analysis of regional climate projections for the Mediterranean. *Reg Environ Change* <https://doi.org/10.1007/s10113-019-01565-w>

New FPS Publications:

FPS Convection:

- Coppola, E., Sobolowski, S., et al., A first-of-its-kind multi-model convection permitting ensemble for investigating convective phenomena over Europe and the Mediterranean, *Climate Dynamics*, <https://doi.org/10.5194/gmd-12-1029-2019> , s2018.
- Lavín-Gullón A., J. Fernández, S. Bastin, R. M. Cardoso, L. Fita, T. M. Giannaros, K. Goergen, J. M. Gutiérrez, S. Katsios, E. Katragkou, T. Lorenz, J. Milovac, P. M. M. Soares, S. Sobolowski, K. Warrach-Sagi (2019) Internal variability vs multi-physics uncertainty in a regional climate model. *under review in Clim Dyn*
- Chan et al., Europe-wide precipitation projections at convection permitting scale with the Unified Model”, *under review in Clim Dyn*

FPS LUCAS:

- Davin et al., Biogeophysical impacts of forestation in Europe: First results from the LUCAS Regional Climate Model intercomparison, *Earth Syst. Dynam. Discuss.*, <https://doi.org/10.5194/esd-2019-4>, in review, 2019 (accepted)
- Breil et al., The opposing effects of afforestation on the diurnal temperature cycle at the surface and in the atmospheric surface layer in the European summer, *under review in J Clim*

Summary of Activities 2019

Date	Action	Responsible person	Comments
28-30 Jan	EURO-CORDEX GA, hosted in GERICS Hamburg	D. Jacob, C. Teichmann hosted in GERICS, Hamburg	
30 Jan	FPS LUCAS side meeting, hosted in GERICS,	D. Rechid with E. Davin, N. de Noblet, E. Katragkou	

	Hamburg		
Jan 2019 - onwards	Contribution to the IPCC AR6 – Chapter Atlas: Europe	D. Jacob, C. Teichmann, S. Sobolowski, E. Katragkou	
7-12 Apr	EGU2019-Vienna 1.Regional climate modeling, including CORDEX (CL5.01) 2.CORDEX FPS Convection splinter meeting (by invitation only) 3. Convection permitting modeling (CL5.04)	Conveners: F. Giorgi et al. S.Sobolowski S. Sobolowski, M. Tölle, H. Truhetz (co-conveners) et al.	
17 May	Submission of the Jacob et al. EURO-CORDEX paper in REEC (revision submitted 31.10)	D. Jacob, C. Teichmann, S. Sobolowski, E. Katragkou and the EURO-CORDEX partners	Title: Regional climate downscaling over Europe: perspectives from the EURO-CORDEX community
9-13 Sep	EMS2019-Copenhagen Climate modelling (UP3.5)	Convener: Stefan Sobolowski	
24-27 Sep	FPS –LUCAS annual meeting, hosted in GERICS, Hamburg	D. Rechid with E. Davin, N. de Noblet, E. Katragkou	
14-18 Oct	ICRC – CORDEX Beijing, China	Participants: C. Teichmann, S. Sobolowski, K. Goergen, E. Coppola, T. Weber, P. Hoffman, G. Langedijk, G. Nikulin, E. Kjellstrom, D. Belusic, A. Remedio, and more...	
26-28 Nov	FPS –CPS annual meeting, hosted by Meteo-FR, Toulouse	S. Sobolowski, E. Coppola,	

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