Report of Activities CORDEX SAM Domain

2020

Publications

Bettolli ML, Solman SA, da Rocha RP, Llopart M, Gutierrez JM, Fernández J, Olmo ME, Lavín-Gullón A, Chou SC, Carneiro Rodrigues D, Coppola E, Balmaceda Huarte R, Barreiro M, Blázquez J, Doyle M, Feijoó M, Huth R, Machado L, Vianna Cuadra S. 2020. The CORDEX Flagship Pilot Study in Southeastern South America: A comparative study of statistical and dynamical downscaling models in simulating daily extreme precipitation events. Climate Dynamics, DOI : 10.1007/s00382-020-05549-z.

Blázquez, J., Silvina, A.S. 2020. Multiscale precipitation variability and extremes over South America: analysis of future changes from a set of CORDEX regional climate model simulations. Climate Dynamics, 55 (7-8), pp. 2089-2106. DOI: 10.1007/s00382-020-05370-8

Builes-Jaramillo, A., Pántano, V. 2020 Comparison of spatial and temporal performance of two Regional Climate Models in the Amazon and La Plata river basins. Atmospheric Research, DOI: 10.1016/j.atmosres.2020.105413.

da Silva, A.E.F., Gomes, D.T., Silveira, C.S., Sakamoto, M.S. 2020. Performance of the cordex project simulations with regard to the representation of the patterns of variation of the precipitation in the XX century on the municipality of Fortaleza, Ceará. Revista Brasileira de Meteorologia, 35 (3), pp. 387-396. DOI: 10.1590/0102-7786353003

de Jesus, E. M., da Rocha, R. P., Crespo, N. M., Reboita, M. S., Gozzo, L. F. 2020. Multi-model climate projections of the main cyclogenesis hot-spots and associated winds over the eastern coast of South America. Climate Dynamics, v. n/a, p. 1-21. https://doi.org/10.1007/s00382-020-05490-1

Falco, M., Carril, A.F., Li, L.Z.X., Cabrelli, C., Menéndez, C.G. 2020. The potential added value of Regional Climate Models in South America using a multiresolution approach. Climate Dynamics, 54 (3-4), pp. 1553-1569. DOI: 10.1007/s00382-019-05073-9

Glazer, R.H., Torres-Alavez, J.A., Coppola, E., Giorgi, F., Das, S., Ashfaq, M., Sines, T. 2020. Projected changes to severe thunderstorm environments as a result of twenty-first century warming from RegCM CORDEX-CORE simulations. Climate Dynamics, DOI: 10.1007/s00382-020-05439-4

Llopart, M., M. S. Reboita, R. P. da Rocha, 2020. Assessment of multi-model climate projections of water resources over South America CORDEX domain. Climate Dynamics 54 (1-2), 99-116.

Llopart, M., L. M. Domingues, C. Torma, F. Giorgi, R. P. da Rocha, T. Ambrizzi, M. S. Reboita, L. M. Alves, E. Coppola, M. L. da Silva, D. O. de Souza, 2020. Assessing changes in the atmospheric water budget as drivers for precipitation change over two CORDEX-CORE domains. Climate Dynamics, v. n/a, p. 1-14. DOI: 10.1007/s00382-020-05539-1

Pessag N., Silvia, F., Solman, S., Miguel, P. 2020. Climate change in northern Patagonia: critical decrease in water resources. Theoretical and Applied Climatology, 140 (3-4), pp. 807-822. DOI: 10.1007/s00704-020-03104-8

Reboita, M.S., Reale, M., da Rocha, R.P., Giorgi, F., Giuliani, G., Coppola, E., Nino, R.B.L., Llopart, M., Torres, J.A., Cavazos, T. 2020. Future changes in the wintertime cyclonic activity over the CORDEX-CORE southern hemisphere domains in a multi-model approach. Climate Dynamics, DOI: 10.1007/s00382-020-05317-z

IPCC

Several colleagues of CORDEX SAM have participated as Lead Authors, Contributing Authors and Reviewers of the WGI and Atlas of the IPCC AR6 contributing with their expertise in regional climate assessments.

Capacity Building Activity

The CORDEX Central America and South America Online Paper-Writing Workshop on Regional Climate Modeling was held during November 24-25 and December 8-9, 2020 with the overall goal of promoting collaborative activities and networking in the SAM/CAM regions with focus on specific regional climate phenomena. In this context, a virtual workshop on paper-writing was carried out with the aim of enhancing the capacity of PhD students and early career researchers in designing a research topic on regional climate modeling and documenting/writing the scientific results based on CORDEX simulations.

Plans for 2021

Capacity building activities and meetings planned for 2021:

A series of short virtual workshops and activities are planned for 2021 with the aim of following up the advances of the research work started during the CORDEX Central America and South America Online Paper-Writing Workshop on Regional Climate Modeling in 2020.

Conference on Regional Climate Modeling and Extreme Events over South America: Results from the CORDEX-Flagship Pilot Study/Lab training activity on how to use, interpret and compare the GCM/RCMs/ESD simulations. University of Buenos Aires, November 2021, Buenos Aires, Argentina. This activity was planned to be in November 2020 at the University of Buenos Aires but it had to be postponed due to the pandemic situation.