SASSCAL
Southern African Science Service Centre for Climate Change and Adaptive Land Management

Funded by
Federal Ministry of Education and Research

GERICS
Climate Service Center Germany

Contributions of the Climate Service Center Germany to SASSCAL

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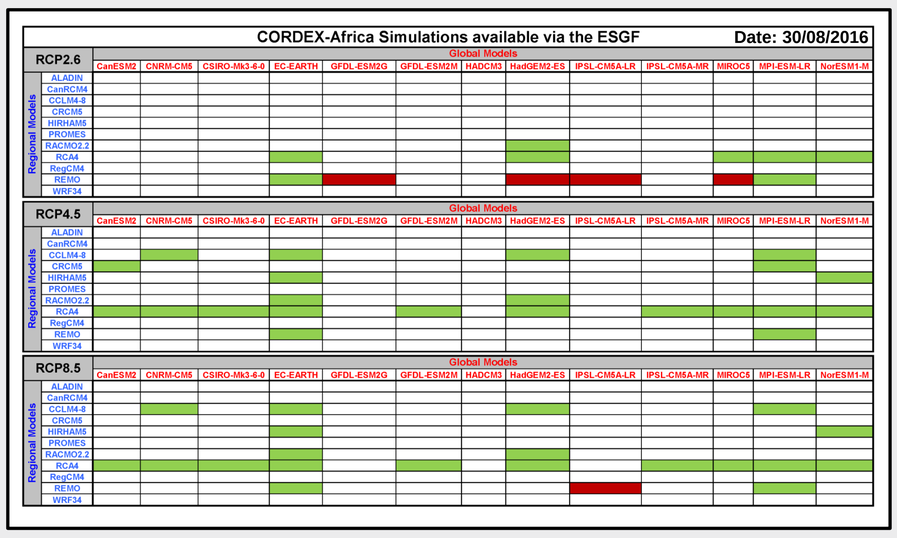
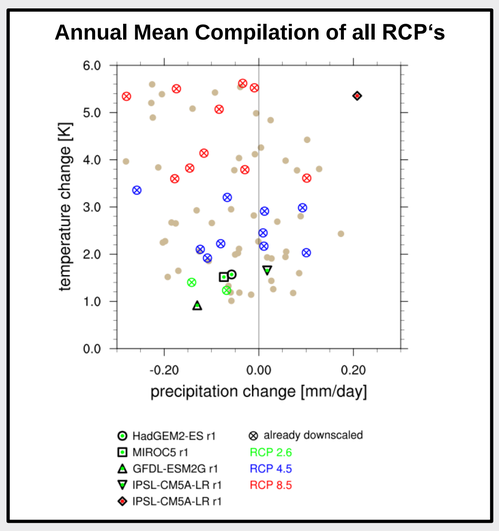
Expanding the CORDEX-Africa data base by five regional climate change projections

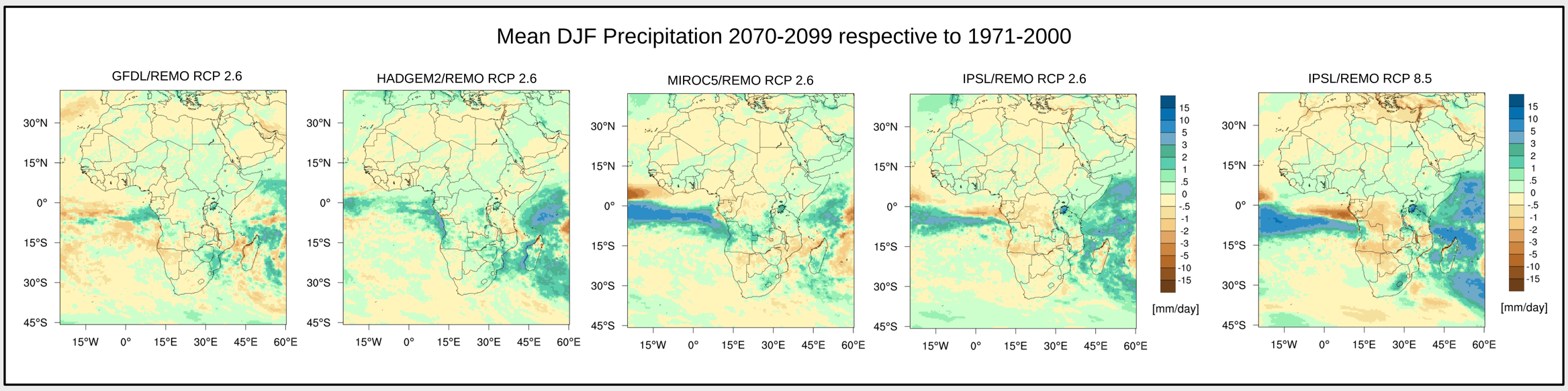
The regional climate model (RCM) projection ensemble of the CORDEX-Africa initiative provides a wide number of different downscaled RCP projections (Moss et al., 2010) from general circulation models (GCMs). Initially, an evaluation of the size and of the GCM-RCM-Scenario combinations of the already available regional climate models ensemble has been carried out.



WCRP CORDEX

Based on the results, five additional transient regional climate change projections (four RCP2.6; one RCP8.5) have been conducted using the regional climate model REMO to systematically expand the database (red boxes in the table to the left-hand side). The data of these five additional projections were uploaded to the Earth System Federation Grid System (ESGF), which is public accessible without charge.





Exemplarily, we show above the projected precipitation change from REMO for the DJF season for the end of the century (2070-2099) respective to the reference period (1971-2000). With respect to SASSCAL, the predominant patterns of projected change in DJF precipitation are a tendency towards a decrease in the region encompassing southern Angola, Zambia, Namibia and Botswana, whereas for the south-eastern parts of South Africa and central Angola an increase is projected.

Conducting capacity building workshops on "Regional climate change assessment and uncertainty analysis"

Development process of a successful workshop

- Conducting a survey of the demands
- Developing the workshop according to the demands of the survey
- Conducting the workshop
- Evaluation of the workshop

Key element of the GERICS activity in SASSCAL is capacity building. Two kinds of workshops are conducted. (I) Workshops that focus on the analysis and interpretation of regional climate change projections with respect to uncertainty and robustness measures. These are conducted jointly with SASSCAL partner institutions. One workshop took place in Lusaka, Zambia back-to-back with a water training course by the colleagues from the University of Jena and in cooperation with the University of Zambia. Another workshop has been held in Stellenbosch, South Africa in cooperation with the CSIR and the UCT/CSAG. (II) Training workshops on the application of the desktop version of the regional climate model REMO called EasyREMO and on the interpretation of its results will be held.

References

Moss, R.H., Edmonds, J.A., Hibbard, K.A., Manning, M.R., Rose, S.K., van Vuuren, D.P., Carter, T.R., Emori, S., Kainuma, M., Kram, T., Meehl, G.A., Mitchell, J.F.B., Nakicenovic, N., Riahi, K., Smith, S.J., Stouffer, R.J., Thomson, A.M., Weyant, J.P. and T.J. Wilbanks (2010): The next generation of scenarios for climate change research and assessment. Nature 463: 747–756, doi:10.1038/nature08823.

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