



The representation of monsoon systems in regional climate models

Andreas Dobler, Steffen Kothe, and Bodo Ahrens

Goethe University, Institute for atmospheric and environmental sciences, Frankfurt am Main, Germany
(dobler@iau.uni-frankfurt.de)

This paper shows downscaling experiments with the regional climate model COSMO-CLM in the domains of the Indian summer monsoon (ISM) and the West Africa monsoon (WAM). It discusses the representation of the monsoon systems in the regional model and the added value of regional climate simulation with respect to different driver data: re-analysis and global climate model data. The discussion is guided by the application of simple indices based on rainfall, outgoing longwave radiation, and wind shear. Major findings are that it is very difficult for the regional model to add value at the monsoon system scale and that the reasons are different for ISM and WAM.