

The North American Monsoon in a Changing Climate

Christopher L. Castro [clcastro@email.arizona.edu], Dept. of Hydrology & Atmospheric Sciences, University of Arizona, Tucson, AZ, USA

The North American monsoon is a period of enhanced convective precipitation that occurs in late summer in the Desert Southwest. This presentation will provide a climatological overview of the monsoon and its role in producing extreme weather. Some unique hazards to the region include flash flooding and dust storms (haboobs). Monsoon precipitation associated with organized convection is now becoming less frequent and more extreme, due to long-term observed changes in atmospheric circulation and increases in atmospheric moisture. Such changes can be well represented with high resolution, convective-permitting atmospheric modeling. Recent changes in the North American monsoon appear broadly consistent with how extreme precipitation is changing globally in a warming world.