

Impacts of a Changing Climate in the U.S. Southern Great Plains

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Abstract

The Southern Great Plains (SGP) experiences weather that is dramatic and consequential, from hurricanes and floods to heat waves and drought. A changing climate exacerbates these extremes, further stressing infrastructure and seriously impacting the socioeconomic systems of its rapidly growing and diverse 34-million population, as well as the natural environment (e.g., ecology, coastal systems). This poster will outline some of the key climate-related stressors for the SGP, and discusses the process of developing the SGP chapter and its key messages/focus areas, for the U. S. Global Change Research Program's (GCRP) Fourth National Climate Assessment (NCA4). NCA4 fulfills a congressional mandate to provide comprehensive information on climate change impacts, adaptation, and resiliency, and is the preeminent source for climate change information within the United States. The SCP chapter is new for NCA4, providing more regional context and detail relevant to the region's public and decision-makers than NCA3 (2014), the former of which amalgamated climate projections and impacts for the northern and southern Great Plains. Furthermore, the chapter incorporates some new ways of evaluating risk, such as risk-based framing, or in providing some more relevant context, by including potential economic impacts, and also in considering case studies of successful adaptations to current climate-related stressors. A team of regional experts consisting of climatologists, researchers, and federal scientists, spanning multiple sectors (agriculture, economy, climate science, tribal professional, infrastructure, health and water resources among others) were selected to develop this chapter. The team solicited expert input from regional stakeholders, and the final chapter underwent multiple rounds of public and governmental review. Each stage of the process and some key outcomes will be described.



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