

Future Southcentral US Wildfire Probability due to Climate Change

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Shifting fire regimes due to climate change is one of the greatest threats to society and our world's ecosystems. This paper explored projections of fire probability in the southcentral U.S. using downscaled climate projections and the Physical Chemistry Fire Frequency Model. Future fire probability is expected to both decrease and increase across the region of Oklahoma, New Mexico, and Texas; it varies across locations. Stakeholders and decision-makers should be aware of changing fire probability in their area of concern. Changes in fire probabilities (CFPs) range from -51 to +240% according to end of century climate projections.

Possibly one of the most important results of this study is that fire probability response (+,-) may deviate from what is expected in certain climate conditions. Fire regimes of southcentral US ecosystems occur in a varied geographic zone; from reactant- to reaction-limited conditions. Potentially making them uniquely responsive to different scenarios of temperature and precipitation change. Understanding these conditions within unique geographic areas may help stakeholders anticipate and prepare for fire regime changes.

For more information, click [here](#).

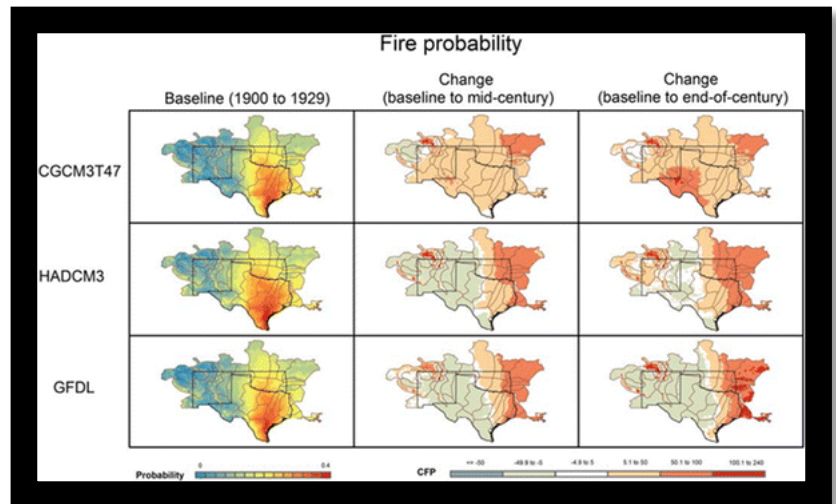


Figure 1 PC2FM-derived future changes in fire probability from baseline period (1900 to 1929) to mid-(2040 to 2069) and end-of-century (2070 to 2099) time periods