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Crop Growers' Adaptive Capacity to Climate Change: A Situated Study of Agriculture in Arizona's Verde Valley

Elizabeth Douglass-Gallagher¹ · Diana Stuart²

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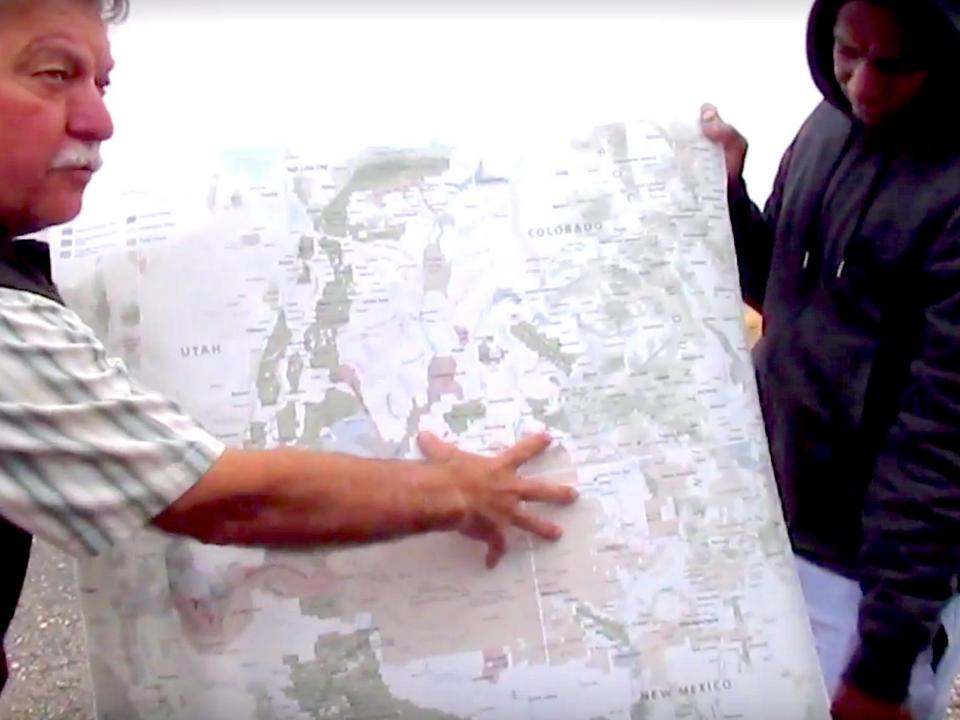
Abstract

Climate change will pose unprecedented challenges for agricultural producers globally, requiring the ability to adapt to new and unpredictable conditions. This study explores the adaptive capacity of crop growers in the Verde Valley, Arizona (US). Rather than examining pre-determined indicators of adaptive capacity, this study adopts a situated framework that examines material conditions, perceptions, and the larger social context. Interviewers used past experiences and future scenarios to allow factors that enhance or constrain adaptive capacity to emerge from the interviews. Findings reveal adaptation is site specific but general measures can be taken to enhance adaptive capacity. Encouraging diversity in crops and water sources, the use of drought and heat tolerant crops, and the use of water conservation practices will likely increase growers' adaptive capacity. In contrast, lack of support from organizations and government programs, lack of diverse crops and sources of water, lack of awareness about climate change, and growers' confidence in their ability to always adapt impairs adaptive capacity. Verde Valley growers will need increased support from local and national organizations to adapt to projected changes. The situated framework applied in this study reveals important insights and could be used to explore adaptive capacity in other agricultural regions.

Keywords Climate change · Agriculture · Adaptive capacity · Water · Arizona















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