



Farmers' Perception and Adaptation Behavior Concerning Land Degradation: A Theoretical Framework and a Case Study in Northwest China

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In an era of global environmental change, social actors from an individual level to a national level are increasingly seeking adaptation strategies to better manage risks from environmental hazards. Vulnerability arises where adaptation capacity is not sufficient in dealing with a changing environment. Adaptation on an individual level and community level is important because of the location specific nature of environmental change. Land degradation is drawing much attention from both governments and academics, because it tends to affect the most vulnerable human populations and ecological systems most significantly. Despite these efforts, there is limited scientific knowledge regarding how farmers at a local level perceive the risks associated with degraded land and how their background, attitude, and living situation may affect their adaptation behavior. This poses a challenge to policy makers who are tasked to enhance the resilience of the society in response to environmental changes.

Degradation of land by pollutant chemicals is particularly serious in China due to aggressive urbanization and industrialization activities over the last four decades. A report by the Ministry of Environmental Protection (MEP) in 2014 suggested that 16.1 percent of the nation's soil is polluted. Other studies suggest that shallow groundwater contamination is even more wide spread, with 80~90 percent being polluted. The government has realized the seriousness of land contamination, and vowed to give high priority to land remediation. Millions of hectares of contaminated agricultural land are expected to be remediated over the next decade. However, farmer's perception and adaptation behavior under this social and environmental change remain unknown. In this presentation, we report a conceptual framework and research hypothesis based on theoretical methodologies found in existing literature. We applied this framework to a case study of degraded land in an arid region in Northwest of China, where land pollution has caused ecological deterioration and affected the livelihood of local farmers. The findings from this study will be reported in the presentation.