

# Sustainability and Adaptability of Pastoralists: Case Study of Sunan and Qilian County in the northwest area of China

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## **Sustainability and Adaptability of Pastoralists: Case Study of Sunan and Qilian County in the northwest area of China**

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### **【Objective】**

The livelihood of pastoralists is highly related to institutional restriction and climate change. The challenge of climate change has been considered an inevitable guarantee for the sustainable development of herders. However, the impact of the institution is powerful as well. This paper investigates local pastoralists' adaptation strategies against policy changes in the context of climate change and analyses its influencing factors and constraints.

### **【Method】**

Case studies were conducted in two pastoral counties of northwest China, a region that suffers frequency drought, low temperature in winter and that has experienced numerous institutional changes over recent decades. The main methods applied in this article are open-up and semi-structured interviews. The database collected was qualitative. Moreover, the past 40 years' meteorological data in two counties were collected from local weather stations, including daily based temperatures and rainfall records used to analyze the validity of climate change perceptions in respondents. The history of institutional transformation was collected from government documents, research reports, and meteorological yearbooks of China.

### **【Results】**

Based on the exploration of seven adaptation strategies and climate change perceptions, the field results show that both counties have experienced livelihood change, the traditional nomadic model has been changed. Our findings reveal that the adaptation strategies adopted by herders are not mainly for coping with climate risk but facing the conflict between ecological environment protection policies and social-economic development. Ethnicity, age, pastureland area, and livestock are influencing factors on choice of strategy. Money and young labor are the main constraints when herders adopt adaptation strategies. Then, perception of climate change may decide the herder's strategy diversification. The local herders' perceptions of climate change were found to be weak due to a lack of education and training agencies. Last, we found that current adaptation strategies mitigate institutional policy impact for short-term sustainability. However, this goes against the premise of the sustainable development goals.

### **【Conclusion】**

In the context of the increasing meat demand and stricter policies in China, herders' existed strategies are not sufficient to support future long-term changes. The findings indicate that pastoral area grassland use policy should more consider the benefit and characteristic of herders, young and high educated group treatment and enhance the dissemination of information or study on climate change risk management.

**Keywords:** pastureland; grazing management; climate perception; adaptation strategies; sustainable development.