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Causes of overgrazing in Inner Mongolian grasslands: Searching for deep leverage points of intervention

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The legendary Mongolian Plateau has faced increasing environmental challenges associated with overgrazing during recent decades, and achieving a sustainability transition for this region needs herders' participation. However, why herders let grasslands be overgrazed even after property rights were privatized – “the tragedy of privatization” – remains unclear. This study aimed to understand the underlying causes of overgrazing by examining the livestock decision-making processes by herders. Specifically, we investigated herders' livestock management goals, perceptions of herder-grassland systems, and livestock management strategies by semi-structured interviews in Xilingol, Inner Mongolia. We found: (1) Herders generally recognized grassland degradation with a decreasing plant species richness and vegetation height; (2) Nearly half of herders were unsatisfied with their current quality of life, especially in terms of income, food security, energy security, and clean water; (3) Herders recognized the economic benefits and food provisioning services of the grassland, but not overgrazing as an important cause of grassland degradation; (4) Without heavy economic pressures, herders were willing to protect their own grasslands, but over-exploited leased grasslands; (5) Herders tried to keep a high and stable level of livestock numbers without being able to anticipate climatic and economic fluctuations; and (6) The government's Forage-Livestock Balance policy was widely resisted by herders. We conclude that herders' increasing aspirations for higher living standards, misperceptions about key drivers of grassland degradation, decoupling of herders' income from grasslands, inability to cope with drought, and ineffective policies together constitute the underlying causes for overgrazing. Future grassland policies should focus more on the “deep” leverage points of intervention, such as reducing poverty and economic inequality, improving the grassland property system, reconnecting grassland conditions to herder's wellbeing, and equipping herders with much needed scientific knowledge to manage grasslands in a way that is both economically profitable and ecologically sustainable.