

## **7. The Linkage Between Pastoralists' Perspectives and Vegetation Threshold Changes in Mongolian Rangelands**

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Rangelands in semi-arid regions are systems in which human activity and nature are tightly linked. Previous studies have suggested that pastoralists prefer opportunistic movement to access highly variable resources associated with high rainfall variability rather than regular movement, and vegetation threshold changes along grazing gradients have been observed across Mongolia. It is therefore important to understand how pastoralists perceive vegetation threshold changes. Here, we test the hypothesis that the pastoralists living in environments with higher rainfall variability have negative perceptions of vegetation threshold changes, whereas pastoralists living in environments with lower rainfall variability have positive perceptions of them. The study areas were steppe and desert-steppe in Mongolia, desert-steppe were relatively higher rainfall variability than steppe. We performed a vegetation survey in each area and interviewed pastoralists along grazing gradients. Our result showed that pastoralists in the desert-steppe area perceived the post-threshold vegetation state negatively, whereas pastoralists in the steppe area perceived them optimistically. We suggest that, although the observed ecological patterns were similar, the pastoralists' perceptions of them were influenced by environmental context, which has important implications for sustainable rangeland management.