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Abstract

Grassland ecosystem as an important terrestrial ecosystem can not only provide a large number of economic products but also many ecological services for humans. Recently with tremendous disturbances and pressures caused by sharply rising human populations and unreasonable human activities on the grassland ecosystems, the accelerated and large-scale degradation and desertification of grassland ecosystems in areas with fragile environmental conditions and poor ecosystem structures have raised increasing concerns. Therefore, it is urgent to figure out optimal adaptation measures to mitigate adverse effect of human activities such as land use changes and minimizing the vulnerability and maximizing the resilience of grassland ecosystem. And resilience assessment concerning how a system, community or individual can deal with disturbance is an effective tool to help ecosystem management. In this study, the Three Rivers Source Region characterized with typical grassland ecosystem and as one of the most ecologically sensitive areas and also the largest animal husbandry production base in Qinghai Province was selected as study area. Based on land cover and land quality information from, e.g. remote sensing, land survey and data from monitoring, statistics or modeling, this study intend to extract the key indicators to assess the resilience of grassland ecosystem and further use the multi-level econometric model to analyze the impact mechanism of driving factors on the grassland ecosystem resilience, based on which put forward some policy recommendations for future grassland ecosystem management and planning.

Keywords: resilience assessment, grassland ecosystem, Three Rivers Source Region

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