

Impact of Natural Disasters on Livelihood Resilience of Sichuan Rural Residents and Policy Implementation

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Livelihood resilience is defined as the capacity of all people across generations to sustain and improve their livelihood opportunities and well-being despite environmental, economic, social and political disturbances. Livelihood resilience has become a popular research and policy concept in the context of climate change. In this paper, we employ the structural dynamics method to describe livelihood resilience of Sichuan rural residents based on four components of livelihood quality, livelihood promotion, livelihood provision, and natural disasters pressure. Results indicate that: (i) The livelihood resilience of rural residents was significantly positively correlated with livelihood quality, livelihood promotion and livelihood provision, but there was a strong negative correlation with the natural disaster pressure. In the past 30 years, both livelihood promotion and livelihood provision declined, and the increase in disasters pressure offset the significant increase in the quality of livelihoods in Sichuan Province. The change curve of the livelihood resilience of rural residents showed the characteristics of first rising and then descending. (ii) The impact of different natural disasters on the resilience of livelihood is different. The contribution rates of earthquake, drought and flood disaster to the resilience of livelihood were -0.9 percent, -0.8 percent, and -0.3 percent respectively. Due to the fact that the research area is not divided into earthquake-stricken area, non-earthquake-stricken area, heavy stricken area and light stricken area, to a certain extent, this has weakened the negative effect of earthquake disaster on the livelihood resilience of rural residents. (iii) From central government perspective, the reform of income distribution, tax system, and to change the reality of the income growth of rural residents behind national economic development are shown to be associated with highly significant and positive impact on livelihood resilience of rural households. From local government perspective, there is need for effective policies and interventions, for example, optimization the structure of financial resources, expansion the scale and channels of financial resources, and improvement the efficiency of fiscal expenditure, that can enhance investment in the agricultural infrastructure and disaster early warning system for improving livelihood resilience. From rural household perspective, livelihood strategies, increasing in education, productive expenditure are very effective in the long term when they are complemented by appropriate public policies such as subsidies of agricultural production material, compulsory education, professional training and innovation of rural residents' perception at different scales.