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CHANGES IN THE IMPACT OF ECOSYSTEM SERVICES ON FARMERS' WELL-BEING AND INTER-GROUP DIFFERENCES IN THE LOESS RESIDUAL AREA OF CHINA

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Abstract

Exploring the differences in the impact of ecosystem services on the well-being of farmers among different groups is particularly important for those farmers who rely mainly on natural resources for their livelihoods. This is beneficial for them to plan their own livelihoods and thereby contribute to their own well-being. This paper uses Luochuan County in the Loess Plateau region of northern Shaanxi as an example. It collects data on perceived ecosystem services (ES) and well-being through a questionnaire survey. Then, structural equation modeling is used to reveal the changes and differences in the impact of ES on farmers' well-being. The results show that at the beginning of the study period, arborized type's ES had a significant impact on both subjective and objective well-being pathways. At the end of the study period, ES had no significant impact on objective well-being. During the study period, dwarfed type had no significant impact on objective well-being. The impact of arborized type on both subjective and objective well-being was significantly higher than that of dwarfed type. The role of livelihood capital in dwarfed type's ES deepened, while the role of livelihood capital in arborized type's ES decreased. During the study period, fruit, firewood, and recreation were the three key ES for the arborized type; fruit, health and wellness, and recreation were the three key ES for the dwarfed type. At the end of the study period, pest and disease control became the key ES. The key capital for the arborized type was human capital and natural capital, while the key capital for the dwarfed type was human capital and social capital. At the end of the study period, the focus was on natural and human capital. The research results provide practical policy recommendations for sustainable ecological environment management and well-being improvement in the study area. Based on this, we have put forward differentiated policy suggestions. We aim to enhance the livelihood capital stock of different types of farmers, improve the convenience for farmers to obtain ecosystem services from a differentiated perspective, and propose improvement measures based on the differentiated welfare demands of different types.

Key words: Ecosystem services; Farmer well-being; Farmer livelihoods; Structural equation modeling; Loess plateau

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