

Evaluating Household Welfare in Participation of China's Natural Forest Protection Program: A Dual Perspective of Income Welfare and Material Welfare

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Abstract: This paper presents novel empirical evidence on the welfare impacts of forest protection programs, focusing on both income and material welfare at the household level. Specifically, we conduct a household survey of 1,271 households in forestry communities that participate in the Natural Forest Protection Program (NFPP) in China. The survey data are collected from 56 state forest enterprises (SFEs) across three provinces in China. We employ the Alkire-Foster method to calculate and decompose the material deprivation index based on household income levels. Our analysis reveals that forestry communities exhibit a significant proportion of households in low-income welfare states, comprising nearly one-fourth (25.41%) of the sample. Furthermore, we observe that the percentage of households in a low-material welfare state is nearly one-fifth (21.70%), with 7.79% of households experiencing both low-income and low-material welfare. Importantly, we find that welfare disparities persist across population subgroups based on occupation and geography. In addition, we assess the impact of the NFPP on household welfare outcomes and identify an elite group of technicians residing in urban communities down the hill who experience positive welfare effects from the program. These findings provide critical insights beyond a single welfare dimension and contribute to the growing literature on evaluating forest protection policies. Furthermore, the results offer valuable lessons for designing and implementing forest protection programs in other developing countries.

Keywords: forest protection programs; forest community households; income welfare; material welfare