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Pathways to improved well-being in agricultural-forest regions: A comparative household analysis in the Brazilian Amazon

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One of the greatest challenges in agricultural and forest regions throughout the world is the positive feedback loop between poverty and environmental degradation, whereby a lack of assets forces poor households to mine their natural resources to survive, which in turn reduces their productive capacity and ability to accumulate more assets. It follows that if these asset constraints can be removed, then households will be more likely to pursue sustainable livelihoods; livelihoods that not only improve their well-being in the long-run, but also the well-being of society as a whole. This bottom up approach considers households as the primary agents of sustainable development, but recognizes that the state and other actors have a large impact on household capabilities through their influence on access to key resources. For several decades, the development and sociology literature has helped to clarify these linkages between actors, capabilities, and specific livelihood strategies. However, it is surprising how few studies have attempted to directly link capabilities and livelihoods to measurable well-being outcomes. Instead it is taken for granted that if poor households can be enabled to pursue certain livelihoods, then improved well-being will necessarily follow. This knowledge gap is particularly stark in the Brazilian Amazon, which is home to 24 million people with education, health, and income levels well below the national average. In this study we examine the links between household assets and several measures of well-being, including self-reported satisfaction and income. Our comparative analysis draws on social and ecological data that was collected at transect, household, and property levels from in two regions in eastern Amazonia in 2010. Using multivariate regression analysis we find that the quality of the land resource, represented by higher clay content in the soil, is the most universally important asset for higher satisfaction and income. We also find that household labor, transport time, and slope are inversely correlated with household satisfaction, while access to technical assistance, membership in farmers' groups, secure title, farm size, and the use of improved agricultural practices (rotations, crop-livestock integration, no-till, and irrigation) are positively correlated with satisfaction. These results imply that the Brazilian government could help improve rural well-being by helping poor farmers: i) acquire non-forest lands with high clay soils that are close to city centers, ii) organize in farmers' groups, iii) access federal technical assistance, particularly for improved agricultural management practices, and iv) acquire secure title for their properties. These goals could be accomplished by changing the siting process of colonization programs, increasing funding for land regularization, and creating new federal assistance programs to promote farm group formation.

Keywords: Eastern Amazon; capital-assets; livelihoods; technical assistance; land tenure