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Trade-offs and synergies in the social-ecological values associated with different land-uses in the eastern Amazon

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Achieving more sustainable development trajectories in tropical agricultural frontiers depends partly on our ability to understand the relationships, including potential trade-offs and synergies, between forest conservation and rural development objectives. Here we extend existing work in this area using survey data from 36 landscapes and nearly 500 properties in the eastern Brazilian Amazon, and examine how such relationships are moderated by factors such as the choice of ecological and socio-economic condition measures, spatial scale (farm, catchment, region), land-use, farm-size and actor type. Understanding the suite of interactions, including both potential trade-offs and synergies, for different types of land-users can help reveal a wider range of barriers and opportunities associated with land management options that take into account additional social objectives beyond economic efficiency, such as regional food and labour security and social justice. Our preliminary results are a first step into understanding the enabling conditions at both farm and landscape levels for such a transition to occur. We reveal high levels of heterogeneity in social and ecological condition and actor characteristics within landscapes dominated by farms from both ends of the property size and wealth spectrum. This same heterogeneity suggests some scope for improving conservation and socioeconomic objectives through integrated changes in the management of both agricultural and forested lands, e.g. through conditional credit access and extension work and more inclusive certification standards. However, the highly dynamic nature of land-use, social and institutional change in forest frontier regions underscores the urgent need to consider how this landscape and actor diversity can be explicitly accounted for in fostering new approaches to land-use sustainability, including legal compliance mechanisms, conservation strategies and investments in the agricultural sector.