

Conference Agenda

Presentations

Poster Session

Time: 24/Apr/2019: 6:00pm-8:00pm

ID: 352

300P HOW DO WE SUPPORT TRANSFORMATION? (POSTER)

Keywords: Cattle ranching, law-enforcement, Brazilian Amazon, Pasture Restoration, Land Sparing

Environmental law-enforcement increases cattle productivity in the Western Brazilian Amazon but bears the risk of a social divide

Johannes Schielein¹, Jan Börner², Judson Ferreira Valentim³

¹Zentrum für Entwicklungsforschung, Germany; ²Institute for Food and Resource Economics, University of Bonn, Germany; ³Empresa Brasileira de Pesquisa Agropecuária (Embrapa), Brazil

Reducing deforestation in tropical forest areas requires effective environmental governance and the transformation of agricultural systems towards less land-demanding production forms. Our study investigates the influence of environmental law-enforcement on land-use decisions of cattle ranchers in the western Brazilian Amazon between 2005-2014. We use a survey-based choice-model to estimate the effect of law-enforcement on the likelihood of ranchers to engage in intensification of cattle production systems on land already under use through means of pasture restoration. We found that increased law-enforcement was a fundamental driver of restoration-efforts which were associated with a higher risk-awareness about the costs of illegal deforestation. Furthermore, farmers who restored pastures also lowered deforestation rates subsequently. However, restoration efforts are more prevalent amongst well-endowed large farms than small-scale family agriculture which could lead to undesirable social consequences and decreased policy effectiveness in the future. Potential socio-economic safe-guards, such as agricultural credits and technical assistance, had mixed effects to promote restoration for a wider audience and need to improve their design and targeting to guarantee socio-economic and environmental sustainability in the region. Our findings are important to support policies aiming at reconciling the forces of growing global and regional socioeconomic drivers towards increasing food production, while improving the wellbeing of the rural population and assuring environmental conservation in the Brazilian Amazon. Additionally, our results are important for other regions, since cattle is a key economic asset for vulnerable farmers and an important determinant of land use change throughout the tropics.