The Interactions Between Agricultural Expansion and Conservation Prioritization, Discourse, and Practice: a Multi-Scalar Analysis in the Amazon Basin

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Associated Program:
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The Amazon basin supports many biodiverse ecosystems but is also the site of rapid agricultural expansion, which often encroaches on areas designated for conservation. This project integrates theoretical and methodological insights from critical conservation studies and land system science to examine the interaction between agricultural expansion and conservation in the Amazon basin as a dynamic socio-ecological process. Specifically, we seek to understand where and how agricultural frontiers and conservation areas overlap, and how these zones of contact impact conservation prioritization by shaping conservation discourse and policy decisions. Through an analysis of forest change data, we will identify where deforestation due to agricultural expansion has recently occurred in conservation areas or areas identified as priorities for future conservation. To examine patterns in these areas, we will conduct a comparative case study analysis of conservation priority and protected areas in three sites. We will use remote sensing to create a time series of deforestation and characterize areas of agricultural infringement. Building on this analysis, we will produce an iterative, probabilistic land use change model to identify areas at risk of future deforestation. Discourse and policy analysis conducted for the case study sites will allow us to understand social and institutional factors driving conservation efforts. We will disseminate our findings through: interactive online maps, as tools for conservation advocacy and engagement with the broader public; two peer-reviewed articles to share our findings with the academic community; and a short multilingual policy brief to inform policy and decision-making in conservation and agriculture.

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