## **ALIX-GARCIA, JENNIFER** [S1-P1]

IT'S COMPLICATED: DIRECT VS. INCENTIVE-BASED LAND CONSERVATION IN MEXICO Co-author: Katharine Sims, Amherst College

Protected areas (PAs) and payments for ecosystem services (PES) are key policies for land conservation worldwide, yet comparison of their effects is extremely limited. We study the impacts of PAs and PES on forest conservation, poverty reduction, and population change at the locality level in Mexico in the most recent decade. We find that on average both policies generated an approximately 20% reduction in expected forest cover loss. Overall, PES generated statistically significant but small poverty alleviation while PAs did not and neither policy substantially influenced population trends. Analysis of impacts across three park types indicates that the biosphere reserves had the largest avoided deforestation impacts, particularly where the risk of deforestation was high. Biosphere reserves also had positive but not statistically significant impacts on poverty alleviation while both strictly protected and mixed use protected areas did not alleviate poverty. Preliminary comparisons of PAs vs. PES based on budgetary costs and production revenues as a proxy for opportunity cost do not suggest that one is clearly more cost-effective than the other. Overall, the findings suggest that both direct and incentive-based conservation mechanisms have worked but that their success depends in complicated ways on the interaction with local conditions. This reinforces previous work highlighting the need for conservation policy that takes into account local livelihoods but is also well-funded and enforced.