## A WATERSHED MOMENT: A SURPRISING LOOK AT WHAT AIDED ENVIRONMENTAL COMPLIANCE IN A BOLVIAN WATER CONSERVATION PROGRAM,

Purdue researchers looked at five factors aiding compliance in a Bolivian water conservation program. Some of the unsual feel-good factors and income variables that come to mind with environmental programs weren't always what made the difference for compliance.

Protecting the environment is easier said than done, and finding ways to make conservation programs truly effective can be a elusive endeavor, as an example from Bolivia demonstrates.

Dr. Jonathan Bauchet, from the Division of Consumer Science at Purdue University's White Lodging-J.W. Marriott, Jr. School of Hospitality and Tourism Management, along with colleagues from Purdue and other institutions, studied program participants' compliance with an environmental conservation program's requirements, with implications for non-profits, policy-makers and other stakeholders.

Their study analyzed participants' compliance in a watershed conservation program implemented by Fundación Natura Bolivia in rural areas of the Andes mountains. The Payments for Ecosystem Services (PES) program provides natural resource owners with financial incentives, conditional on their adoption of specific environmental behaviors. Compliance with the conditions is thought to be critically necessary for PES programs' effectiveness, but it is poorly understood.

Dr. Bauchet and colleagues found compliance was primarily associated with three program features: it was higher when conditions were less restrictive, when participants enrolled larger land area, and when participants were repeatedly monitored for compliance. However, compliance was not related to household characteristics (income, wealth, education, age), to individuals' values and beliefs, nor to individuals' feelings of trust and reciprocity.

The results demonstrate that program designers --conservation professionals and policy makers -- have a large amount of control over compliance in their programs; the burdent of driving compliance rests on the programs themselves more than on participants. Designers should carefully consider the level of restrictions placed on participants' land, and implement repeated monitoring.

Of the research, Dr. Bauchet said "Farmers and landowners in rural Bolivia are good stewards of their land and are intrinsically motivated to conserve the environment. To help them do so, they need well-designed policies and programs based on reasonable expectations and sustained relationships over time."

## **MAJOR TAKEAWAYS:**

- Environmental conservation professionals and policy makers have a large amount of control over participant's compliance in the programs they design.
- Compliance with programs' requirements was mainly associated with program features: type of contract between program and participants, area contract covered, and implementation of repated monitoring.
- Contracts that provide a higher financial incentive, in exchange for more restrictions on land use, exhibited lower levels of compliance on average than lower-incentive, less-restrictive contracts.
- Compliance increased with repeated contacts between program staff and participants
- Households' economic characteristics (income, wealth) and demographic (age, gender, education level) had surprisingly little relationships to compliance
- Individual values, environmental beliefs, and social constraints, were not associated with higher compliance.

## WHO NEEDS TO KNOW:

- Conservationists
- Governments
- Environmental policy makers
- Environmental conservation program designers
- NGOs
- Farmers
- Landowners

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