

Project aids environmental decisions in the face of complicated trade-offs

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EARTH University research collaborator Ramon Leon, left, works with MSU doctoral student Delanie Kellon and MSU researcher Robert Richardson in Costa Rica. Credit: Photo by Joe Arvai, MSU

Energy shortages, climate change, pollution - some of the world's most pressing problems weigh on the shoulders of some of the world's most hard-pressed people. Michigan State University researchers aim to help them sort out such complex problems.

International development programs have long sought to improve quality of life for people living in developing regions of the world, said researcher Joe Arvai, a faculty member in the Department of Community, Agriculture, Recreation and Resource Studies, or CARRS.



Development agencies now recognize the need to include <u>environmental</u> <u>sustainability</u> as part of their mission, he said, but difficult trade-offs often are involved -- typically weighed by individuals and groups with differing needs and preferences.

Should developing nations clear forests for fuel or to plant crops? Apply more fertilizer and pesticide to boost yields? Develop large or small plantations? If minority or otherwise marginalized farmers are even asked their opinions, will it matter?

"What I'm really interested in is people, when they're making decisions, how they confront trade-offs across objectives," Arvai explained. "People find it difficult to confront a number of objectives at a time." Many considerations tend to fall by the wayside, he said, and emotional responses to fundamental concerns usually dominate decision-making.

Opinion surveys tend to take the form of multiple choice polls, but those don't always get to the bottom of people's concerns or help them work complex issues through, Arvai explained. He's interested in testing such methods against a more in-depth and open-ended approach that taps recent insights from the field of behavioral decision research.

"The hope is whatever choices people end up making are a truer reflection of what really matters to them, as opposed to giving them information and hoping they consider everything," he said, "and taking a leap of faith that researchers and policymakers really have a handle on what people care about."

"This is all in the realm of international development, where at least historically, it has been sort of expert-driven -- where we want to encourage farmers to behave in this certain way," added project collaborator Robert Richardson, a CARRS colleague of Arvai's.



Decisions likely to confront poor farmers might include whether to seek payment for environmental services in an international climate change mitigation program. "The question is, is the narrow (survey) approach capturing peoples' full willingness to make tradeoffs," Richardson said.

Doctoral student Delanie Kellon is working with the group, doing research field work in Costa Rica, in cooperation with EARTH University there. John Kerr, another CARRS faculty member, also is participating and hopes to incorporate similar research conducted recently by some doctoral candidate students of his in Tanzania.

"There is a lot of discussion about the role of <u>people</u> in tropical countries in protecting forests to help limit global warming, since tropical forests store carbon and cutting them releases carbon dioxide," Kerr said. "Many programs exist to reduce tropical deforestation, but it's hard to find success stories. A better understanding of local people's perceptions of tradeoffs could help in the design of programs to reduce deforestation."

Source: Michigan State University (<u>news</u> : <u>web</u>)

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