Community capital

Veterinary scientist Alexander Travis collaborated with economists and conservation biologists to assess how a new model promoting sustainable agriculture helps Zambian communities address climate change, protect biodiversity and increase income.

What was the impetus for this project? What was the main objective of the work at the beginning of the project?

The Luangwa valley in Zambia is extremely important in terms of wildlife, but it is under increasing human pressure. Dale Lewis, a wildlife biologist working in the area, realized that rural livelihoods and food security were crucial to effective conservation. He came up with a business approach called Community Markets for Conservation (COMACO) that uses markets to link improvements in farmers' income and food security with environmental outcomes. When we started working with COMACO in 2005, our research objectives were both to evaluate the model and help develop it. We identified the threats of climate change to the Luangwa valley and COMACO's potential to address them. First, COMACO encourages diversification of food crops so farmers can better cope with extreme weather events. Then, by making value-added products and providing access to high-value markets, it incentivizes farming as opposed to alternatives such as charcoal production. It trains farmers to adopt practices that improve soil quality, to increase the potential for carbon sequestration and to increase crop yields. Finally, agroforestry is promoted, representing a potential entry point into carbon markets. These approaches allow farmers to stay productive on one plot longer, potentially reducing deforestation.

How did you go about finding suitable collaborators?

When we started the Cornell Center for Wildlife Conservation, we made connections with people who later became collaborators on the project. Cornell is also home to the Atkinson Center for a Sustainable Future, which awarded us funding to pursue new research in soil carbon sequestration. Furthermore, our food scientists helped foster a partnership with General Mills that is proving extremely helpful to COMACO. Our collaborations have certainly evolved with the development of the work.

Did you encounter any difficulties in working with a team of experts with different research backgrounds?

The biggest challenge was the difference in approach of research scientists and practitioners in the field. Most basic research has the goal of creating generalizable knowledge, whereas the practitioner wants the best answer for that specific site at that specific time. We realized that there was going to be a dynamic tension between these goals, so good communication was essential. The principle that helped guide us was that our research questions always had to provide value to the people in the region.

What was the highlight of working with an interdisciplinary team?

From the viewpoint of the villagers and COMACO staff, it was really gratifying to see how the different disciplines helped build-up human capital in the valley and see the real pride in the Zambian ownership of COMACO.

Any surprises?

Seeing technology leaps made the biggest impression on me. We introduced a few satellite internet linkages, and these had enormous impacts both for business and research.

Did you learn any lessons about interdisciplinary collaboration from this project that would benefit others trying to do similar work?

To have a lasting impact, it is important to have a partner on the ground that is engaged with the project beyond the timescale of a typical grant. Because interdisciplinary projects will pull in so many directions as important new topics are identified, you also need collaborators with the skills and commitment to continue to raise research funds while doing the work.

Was it difficult to get financial support, and what would you suggest to researchers looking for funding to carry out interdisciplinary work?

COMACO is primarily funded by the Norwegian Embassy, CARE International, and the Howard Buffett, Mulago, and Lundin foundations. But we received funding for the research questions through the Sustainable Agriculture and Natural Resource Management Program run by the US Agency for International Development. Finding funding for interdisciplinary research on a large scale is hard, but it is essential because the issues of the environment and human development are so closely related. From a practical perspective, one thing I'd suggest is trying to leave some flexibility in the budget. Having different disciplines working together seems to be a spark for creativity, leading to a whole new set of questions.

Any final thoughts?

In climate change research we need people who can see the big picture and the connections between the disciplines. Students need exposure to different disciplines during their training, and academic culture needs to shift by offering career opportunities that encourage interdisciplinary approaches.

INTERVIEW BY MONICA CONTESTABILE

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