adine Lehrer
niversity of Minnesota, St. Paul, Minnesota

004 EPA STAR Graduate Fellowship Conference *Next Generation Scientists—Next Opportunities*

ocial capital and policy in agroforestry systems of southern Minnesota and Peruvian Amazon

groforestry and adoption

tandard agricultural practices contribute to or water quality and loss of soil fertility.[1]
southern Minnesota, nitrogen and phosphorus leach from corn soybean monocultures into rivers and lakes.
Amazonian Peru, slash-and-burn agriculture and coca ivation accelerate deforestation, erosion, and sedimentation.


ejandro, Peru


Granite Falls, MN


Ucayali, Peru


Montevideo, MN

groforestry and crop diversification can ovide environmental/economic benefits.[2]
rennial crop roots can hold soil, prevent erosion and mineral ching, and minimize fertilizer/pesticide application.
versified plantings minimize risk of crop failures and provide tiple income sources.

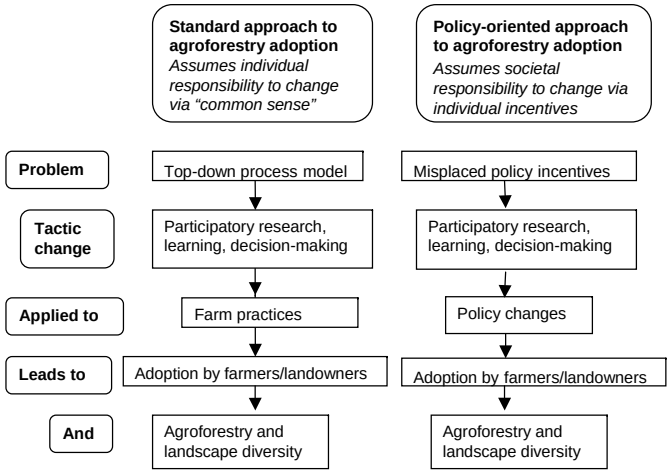

Guazuma crinita, S. Alejandro, Peru


Populus hybrid, Montevideo, MN

hen why is agroforestry not widely adopted?
ny adoption models fault a top-down extension approach, and ocate participatory processes for farmers and scientists.[3]
hile participatory methods are important, they can become ailed by low levels of trust and social capital, and may not ress the role of policy incentives in farmer decision-making.

Role of policy in farmer decisions

•Extension agencies benefit from a model of participation that recognizes policy incentives.



•Key policies impacting agroforestry:
-Minnesota: agricultural commodity subsidies, CSP
-Peru: coca eradication policies, trade agreements

•Hypothesis: Stakeholder perceptions of and involvement in policy development will influence the success of participatory processes promoting agroforestry and landscape diversity.

Study methods and impacts

•Study methodologies
-Semi-structured interviews with stakeholders[a]
-Stakeholder analyses of roles and perceptions[o]


Community meeting, Peru


Community project, MN


Harvesting papayas, Peru


Raking hay, MN

•Cross-cultural comparisons

	Southern Minnesota	Peruvian Amazon
Ultimate goal	Economic development with environmental conservation	Economic development with environmental conservation
Functional goal	Landscape diversity (including agroforestry)	Landscape diversity (including agroforestry)
Obstacles	Corn and soybean monocultures	Slash-and-burn agriculture Coca plantations
Underlying policy issues	Agricultural commodity subsidies	Coca eradication politics
Possible solutions	Changes in legislation (CSP?)	Changes in legislation and enforcement
Obstacles to change or policy involvement	•Limited trust/collaboration with government, universities, and NGOs •Limited financial capital in rural areas. •Land prices	•Limited trust/collaboration with government, universities, and NGOs •Limited financial capital in rural areas •Transport, market access

•Expected results: Recognizing the necessity of stakeholder involvement in agroforestry policy can improve participatory processes for land use change.

1. Brooks *et al.* 1992; Pulgar-Vidal 2004 2. Garrett & Buck 1997; MacDicken & Vergara 1990 3. Feder *et al.* 1999; Rogers 1995 a. Abbot & Gujit 1998 o. Bryson 2002

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