

## What mechanisms are most appropriate to facilitate provision of ecosystem services?

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Payment for ecosystem services can be based on a range of economic incentives, i.e., direct payments, markets, subsidies, certification, and price premiums. Farmers may also adopt environmentally and socially more friendly practices due to other incentives, both economic and non-economic. Some examples:

**Direct payment.** One good pilot project funded by the Global Environmental Facility provides very small payments to farmers moving their land use/cover from one stage to the next (out of 20 land covers). Global environmental benefits (C stocks, biodiversity, reduced land degradation, improved water regimes) are being generated from each step-wise change.

**Other economic incentives.** We conducted fieldwork to assess the impacts on producers of **certified** fair trade, specialty, **organic** coffees in Mexico and Guatemala. Farmers produce such coffees in the face of a strong and growing market and on the promise of receiving **price premiums** reflecting the consumers' (in the US and Europe) willingness to pay for the generation of **environmental and social goods**. Unfortunately, financial returns to adopters (Table 1) were negative, leading us to search for explanations for the otherwise irrational economic behavior.

	<b>Yield</b>	<b>Cost of production</b>	<b>Price received</b>
<b>Conventional</b>	<b>2-3 x</b>	<b>x</b>	<b>x</b>
<b>Organic-ft</b>	<b>x</b>	<b>2 x</b>	<b>x + 5-20%</b>

It now appears that farmers adopted more costly and lower yielding practices because the buyer (Green Mountain Coffee Roasters) paid farmers for their outputs much earlier than other buyers; and an NGO (EcologicFinance) provides low or no cost credit to certified organic fair trade producers. These were two largely unanticipated strong financial incentives driving adoption.

**Non-economic or less direct incentives.** The same farmers in Guatemala and Mexico also had children's education, health care, improved nutrition and food intake, housing improvement, and group meeting facilities as priorities high enough that they clearly (as almost all women emphasized) would have accepted development in such areas in lieu of direct financial gains.

Farmer participants in Farmer Field Schools in eastern Uganda and western Kenya appeared to adopt conservation measures that didn't benefit them: they themselves expressed in various ways that it was important being a member of the FFS groups both because of increased social solidarity and because the project itself might someday provide needed benefits. One discussion, in ki-Swahili and after explanation that we were just and only trying to understand farmers' participation in the FFSs went something like:

Young male: "Well, what we really need is a pick-up truck to take our produce to market!"

Almost the whole group almost in unison: "We all agreed that this meeting is NOT about that!"

Young male: "I know, I know; but it never hurts to try to kick the ball when the goal is nearby!"

Everyone including interviewer: [*Howls of laughter.*]