

Subsistence Farmers Move Into the Market

Traditional subsistence farming practices in the upper Manupali River valley in the Philippines are coming to an end. Recent improvements in road way and communication infrastructure, as well as increased migration, have exposed farmers in the region to commercial markets. Exposure to these markets has prompted subsistence farmers to begin growing crops for sale and signals a change in the way they approach production.

This expansion of the market has coincided with a period in which Philippine government policies greatly increased domestic

Goals of the study

- Understand how upland farmers respond to price signals
- Investigate the impacts of policies affecting agriculture prices
- Determine what other factors influence land use decisions

prices of corn and temperate-climate vegetables grown in highland areas, such as potato and cabbage. By increasing cultivation of these highly erosive crops, farmers face the dangers of accelerated soil loss and declining soil quality and productivity. This increases the importance of astute policy decisions at both the local and national levels. Since market prices transmit policy reforms, policy makers can step away from developing location-specific projects and focus on large-scale reforms. This can have significant economic and environmental implications for land management strategies of farmers throughout the region.

This brief highlights the effects of market prices on subsistence farmers by demonstrating how policy is transmitted through prices. It shows that:

- Infrastructure facilitating communication of market prices and flow of goods to market is critical to the success of economic reforms
- Widespread economic reforms reach farmers through market prices
- Farmers' land management strategies are influenced by market prices

Trade reforms transmitted through market prices will:

- Alter land use and crop production
- Reduce deforestation, loss of soil fertility, and downstream or off-site environmental impacts



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Shifts in land management practices increased maize production.

- Policy makers need to adapt their implementation strategies to reach the largest number of farmers

Increased awareness of upland and lowland production

In addition to market prices, upland farmers are also responding to the lowland shift towards modern irrigation practices. The rise in lowland irrigation practices in the Philippines has resulted in increased income, agricultural expansion, and intensification for lowland farmers. Increased production has generated a need for additional employment, a need gladly met by upland farmers looking to supplement household incomes. While increases in off-farm employment for upland households draw some labor away from farming, it also provides upland farmers with the money to intensify their own agricultural production.

The growing awareness of the economic and environmental ties between lowland and upland farms has brought upland farming practices under intense scrutiny. Erosive upland farming practices resulting in increased reservoir sedimentation and silting of irrigation canals in the lowlands may interfere with the productivity of lowland irrigation practices and, ultimately, the economic stability of lowland and upland households. To avoid harmful consequences for both lowland and upland

farmers, it is important to start by understanding the ways upland farmers respond to shifts in market prices and what that means for upland agriculture.

Farmers surveyed

A series of surveys conducted among 80 upland farming households between 1994 and 2002 in the Manupali River valley gathered information about the region's household composition, farm-production, input use, land management history, sales, non-farm income, farmers' perceptions of erosion and soil degradation, cropping plans, and anticipated crop prices for the next cropping season.

Transmitted through prices, economic policies played a significant role in changing the farmers' choice of which crops to plant. Farmers indicated that their decisions regarding land management and crop choice were based mainly on changes in market prices. Those changes prompted them to substitute maize and some vegetables in place of other crops. Overall, the data indicated that:

1. Higher crop prices result in increased cropland and intensification of production on existing farms;
2. Market/policy shocks that raise maize and vegetable prices reduce fallow land and increase deforestation;
3. Higher wages for farm workers have slowed and possibly reversed the expansion and intensification of upland farming practices and increased the availability of off-farm employment opportunities for upland households.

WTO compliance

Philippine government policies have supported corn and vegetable prices through import restrictions such as tariffs

and quotas; however, WTO rules require the Philippines to scale back agricultural tariffs over time, ultimately lowering the maize tariff by about half. This requirement, transmitted through market price changes, will prompt farmers to reduce the area of maize planted and retire land to less erosive uses, thereby reducing deforestation pressures, loss of soil fertility, and downstream or off-site damages.

Other WTO-related trade policy reforms have facilitated expansion of labor-intensive non-farm industries, such as garments, electronics and call center operations. Their growth has increased the number of people seeking more remunerative off-farm employment, thereby reducing the farm labor force and contributing further to the reduction in total upland farm area.

Market prices can transmit nationwide reforms to farmers.

Looking ahead

Understanding farmers' responses to price changes and off-farm employment alternatives is important for the design of policies and projects directed at upland development and the conservation of forest, land, and water resources. Thanks to the pervasiveness of market prices, policy makers can focus their efforts on using market mechanisms to induce desired land use responses among farmers. Of course, markets are not perfect; nor are



Photo courtesy of SANREM CRSP Phase II.

Subsistence farmers are reacting to increased market exposure.

market-based interventions a panacea for all the problems of upland farming. It is still important to design "location-specific" policies and projects directed at upland development and the conservation of forest, land, and water resources. However, such direct interventions will almost certainly fail if they ignore or contradict signals that farmers receive through markets. There is thus a need to coordinate policies on trade, environment and agricultural development. Our research shows that conservations projects in uplands are more likely to have greater, longer-lasting, and more cost-effective impacts on the management of natural resources when implemented in conjunction with market-based measures and infrastructure improvements. ■

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For more information, see:

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