Shifting Cultivation and its Alternatives in Bangladesh: Productivity, Risk and Discount Rate, by M. A. Monayem Miah and S. M. Fakhrul Islam, SANDEE Working Paper No. 24 -07

Abstract

This study evaluates the economic feasibility of replacing shifting cultivation (*Jhum*)with settled agriculture and new soil conservation technology based on an assessment of the farmers' risk and corresponding discount rates in the Khagrachari hill district of Bangladesh. Shifting cultivation can cause top soil loss, degradation of soil quality, and decrease in crop yield but significant improvements in yields could also be achieved with increased fallowing. On the other hand, the use of soil conservation technology is found to be highly profitable. The study finds that the social discount rate is a crucial factor determining the switch from shifting cultivation to new soil conservation methods. *Jhum* farmers are likely to switch to the new technology in a 3-year rotation scheme only if their rate of discount is below 58%. On the other hand, farmers with a 6-year rotation would switch as long as their discount rate is less 33%. Because they discount the future rather heavily, poor farmers with short fallows would require very high returns to tempt them to adopt a new type of farming. High initial cost of establishment, long gestation period, and unclear customary rights are additional deterrents to the adoption of soil conservation technology. The study concludes that these problems can be overcome if financial support and technical assistance are made available.