

## HOUSEHOLD WELFARE IMPACT: METHODOLOGICAL BACKGROUND

This section determines whether potential price increases are beneficial or detrimental for households, and if detrimental, it allows identification of the most vulnerable segments of the population.

Households can be both producers and consumers of crops at the same time. For example, a rural household that grows rice on the farm can both sell and consume rice. An urban household tends only to purchase rice and not produce it. In order to assess how households fare when food prices rise, it is important to consider the household's net position with respect to production and consumption. In fact, price increases can benefit net-producers of crops but can hurt net-consumers of crops.

Thus, due to the potential dual nature of the household, it is necessary to understand the net position of a household - whether a household is a net producer or net consumer. A net producer household is defined as a household for which total gross income derived from the crop exceeds total purchases. For net producer households price increases will be beneficial. A net consumer household is a household for which total gross income derived from the crop is less than total purchases. In this case an increase in the price of the selected crop hurts the household. The overall household impact is measured by the effect of the price change on household's net welfare, defined as the difference between the producer gains and consumer losses.

In order to calculate the household net welfare impacts, we use the methodology as described in Minot and Goletti (1999) and adapted as discussed in Dawe and Maltsoglou (2009). For further details the reader may turn to Appendix 1.

Note that, the literature and methodology applied to calculate the welfare impacts are based on a 10 percent price increase on the producer side. This hypothetical price change has to be cross referenced with price changes of interest. The percent price change can be compared with recent price changes as further discussed in Section 6 or, from a bioenergy development point of view, with simulations linking bioenergy developments with the impacts on increases in the price of rice.

