

only in terms of field-level and secondary data but also in terms of bibliographical information pertaining to the subject areas. Because it is well written and organized, with effective language and a lucid presentation, it can be accessible to researchers, policy makers, and general readers alike. From an academic perspective, it can be good supplementary reading for agricultural economics, natural resource and environmental economics, and area studies pertaining to India and Asia.

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Biofuels and rural poverty, by Joy Clancy, Abingdon, UK, Routledge, 2013, ISBN 978-1-84407-719-9

In recent years, biofuels have received a great deal of attention as an alternative source of energy to traditional petroleum-based fuels because of concerns about energy security and climate change. Biofuels have also been touted as a means to spur rural development. It is in this context that *Biofuels and Rural Poverty* contributes to the current literature. The book makes a valuable contribution because it is able to exploit a niche of the biofuel debate that is often mentioned but glossed over, that is, the effects that larger-scale production of biofuels may have on the rural poor. In particular, Clancy focuses on smallholder livelihoods and also includes a discussion on ecological issues pertaining to biofuels. The analysis in the book is qualitative in nature, with examples and statistics stemming from many different countries – India, Mali and Indonesia, to name a few.

The introduction sets up the context of biofuel production in recent years: the feed stocks (first and second generation) that are already in play and are likely to be implemented in the future, and the agendas of the North and the South. (The definitions of North and South follow those of the Brandt Report [1980].) There are six more chapters that follow, the first of which describes what it means to be poor, what conditions may lead to poverty and how participation in the biofuel chain has to be equitable for the poor to benefit. The author notes that equal inclusion in the biofuel production chain is necessary; otherwise, large-scale agribusiness can out-compete the smallholders. Further, biofuels may lead to diversification of income if families are able to participate in more than one aspect of the biofuel chain, but policies to support the poor are needed for this to occur. This chapter also addresses how biofuels may be used as an energy source, not just as a commodity, and thus also contribute to lowering energy poverty (which is a component of overall poverty).

Chapter 3 again speaks to diversification, emphasizing issues of land ownership. Land tenure is important in the context of biofuels because it is one of the major indicators of who benefits from large-scale biofuel production. Often, small-scale farmers without legal ownership of their land are displaced by more powerful, wealthier producers. Although biofuels create employment, is it enough to absorb those who are displaced? It has also been found that working conditions in the newly created jobs are often very poor.

The issues of land ownership and access are further complicated by social disruption as large-scale farmers push out small-scale ones. The author provides the examples of

Kalimantan in Indonesia and Santarem in Brazil, where large numbers of small farmers have been displaced due to the production of palm and sugarcane (respectively) for biofuels. The type of land that is brought into production can also play an indirect role in the livelihoods of the rural poor. As the author notes, in many countries non-agricultural land is often deemed “degraded”, “unproductive”, “idle”, “marginal”, or “abandoned” (page 59). However, this does not mean that the land has no value; in actuality, many rural people, especially the poorest, use this land to provide their households with fuel wood, fodder and herding. Therefore, dedicating this land to biofuels may push these communities further into poverty.

This third chapter also introduces the issue of gender inequality, an important theme which prevails throughout the rest of the book. Women’s access and control over household assets differ from men’s, and it has been found that men are usually the decision makers. This is also true in the decision to grow biofuels, which excludes women as participants and may place household food security at risk (because women oversee this aspect of the household).

Other disadvantages faced by women include the fact that fewer women have ownership of land; and in the cases where they do have ownership, they may not have the necessary credit or collateral to participate in biofuels (p. 65). Also, with respect to degraded land, women are more likely to depend on it as a resource, and thus are more adversely affected when they can no longer draw on it. The author does suggest that these issues of gender bias could be overcome in the context of biofuels with targeted policies that take women’s roles into account.

Next, the book next shifts gears to assess ecosystem services and their relationship to biofuel expansion. In this chapter, the effect of biofuel production on the natural environment is explored, particularly in terms of land expansion into biofuel production. There is a link between ecosystem services and the rural poor because they depend on some of these services for their well-being. These may include, but are not limited to, food, fuel, water and medicines (p. 71). Damage to ecosystems is again especially felt by the rural poor, both directly and indirectly: directly, through possible contamination of water used for drinking, and indirectly through the creation (through dam building) of an environment where malarial mosquitoes may breed. The poor are particularly adversely affected because they do not have the same coping mechanisms available to the wealthy – for example, technologies to purify contaminated water.

Clancy also devotes a section to discussion of how water resources may be affected in biofuels. She talks about two stages where the demands for water resources come into play: first, in the need to irrigate biofuel crops, and secondly, in the production process that turns feedstock into fuel. Although biofuels can be damaging, the author does put forth the idea of ecosystem-friendly biofuels. Biofuels can be ecosystem-friendly depending on where they are planted and grown, how they are grown and the feedstock used (p. 87), emphasizing the importance of good management practices. The institutions and governments responsible for policy options in biofuels must make sure the natural environment is considered when making decisions about expansion.

In Chapters 5 and 6, issues of food and energy security and poverty reduction are discussed. An important component to any biofuel discussion is the impacts on food prices. If biofuels drive up food prices, either by taking land away from staple food crops or through the diversion of some of the crops (e.g. maize) to biofuel production, the poor are the hardest hit because close to 50% of their household income is spent on food. Although biofuels have been blamed for rises in food prices, the author concludes that some of this blame may not be justified.

The issue of land ownership is also further explored in Chapter 5. The lack of land ownership or threatened access to land may inhibit the ability of a poor household to grow its own food. A distinction is also made between food availability and access. The author notes that there may be enough (in terms of quantity) food available to feed the world's population, but access is limited, particularly in many developing countries. Inclusion of these excluded poor in the biofuel value chain could greatly improve livelihoods.

Chapter 6 expands upon the ideas put forth in Chapter 2 and tries to answer the question of whether biofuels can help reduce the energy poverty of the rural poor. The answer is yes, biofuels can provide a fuel source, but the policies must target the rural poor, and they must have access to the biofuels in question. The idea of time poverty is also introduced, particularly in the context of women. If biofuels could supplement energy sources, the time poverty of women who spend large portions of their day collecting fuel might be diminished (p. 127).

Can biofuels realistically be pro-poor? In Chapter 7, Clancy really brings home the point that they can be but there have to be many enabling factors. These include institutions and governance, accounting for inequalities in benefits from biofuels both in terms of the poor and in terms of gender, and most importantly, understanding that a "one size fits all" model will not work (p. 168). The heterogeneity of the rural poor in different countries must be well understood and they must be empowered politically. Usually it is the wealthier groups with political power who are better able to gain from a biofuel policy. It is also important to look at both the agricultural and energy policy realms holistically to make biofuels pro-poor.

In summary, Joy Clancy's *Biofuels and Rural Poverty* makes an important contribution to the literature on biofuels, particularly in the aspects of land ownership and access, gender gaps, and equitability in the distribution of benefits to the poor. The literature review provided in the book is extensive and covers many countries. The "boxes" and diagrams used to support the author's arguments are also successful in succinctly providing examples from various countries and a vast array of biofuel programs. Relational diagrams such as Figure 4.1 are essential in mapping out the complex relationships that exist in biofuels. Although the book is generally strong in statistics and in drawing links between different topics, graphs of biofuel trends and land-ownership trends where biofuel projects have been implemented would have added to the strength of the argument. The ties of biofuel development to energy poverty, although addressed well later in the book (Chapter 6), could also have been brought up in Chapter 2 in order to provide a better context for energy poverty and the relationship to the rural poor. Overall, the book is well written and organized, with the chapters exhibiting a logical flow.

Reference

Brandt, W. 1980. *North-South, a programme for survival: Report of the Independent Commission on International Development Issues*. Vol. 1. London: Pan.

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