

Competition between energy and food production for agricultural land and its impacts on commodity prices

Joachim von Braun, IFPRI, Washington DC

ABSTRACT for a presentation at the first “Garnaut Climate Change Review Public Forum on 17 August, on ‘Climate Change: Land Management, Agriculture and forestry’

World agriculture is at a turning point. Energy and climate change re-define the world food equations. This presentation examines how developing countries and the poor will be affected by the opportunities and challenges posed by increased production of biofuels, and what policies are needed to achieve win-win outcomes, i.e. wins for economic development, energy security, and food security of the poor.

Biofuels are a promising tool for securing energy supply and decreasing greenhouse gas emissions. They also have the potential to raise the demand for agricultural products and may provide income sources from utilizing marginal lands and crop residues. Yet, biofuel production also may introduce new challenges and risks for the poor.

For countries with a limited natural resource base, biofuels could unduly divert land, water, and capital as well as political attention away from the production of food and feed. The tradeoff between fuel and food production can lead to increased commodity prices and higher food price fluctuations. Distorting subsidy regimes for biofuels may also have adverse effects on the poor, since subsidized fuel (of which the poor benefit little) acts as an implicit tax on food (on which the poor spend a lot of their small incomes).

Drawing on analyses at the global, regional, and national levels, the impacts of an expansion of biofuel production on natural resources use, markets and trade, and production, income and employment are examined.

Two global models are used to assess price effects of agriculture – energy linkages:

- IFPRI’s IMPACT model - a partial equilibrium model that simulates prices and land and water allocation endogenously
- The MIRAGE model – a global computable general equilibrium model handled at IFPRI

The model results suggest that the incremental *price effects* of biofuels can be significant but with appropriate market and technology policies they will not pose a major threat to food security. The need for a coherent biofuels-policy framework at international and national levels is emphasized that explicitly takes food security of the poor into consideration.