



# Biofuels & Developing Countries

Where the majority of the population often lives in rural areas and subsists on agriculture, the development of biofuels holds great promise. Developing countries are more vulnerable to natural disasters (storms, floods and droughts), therefore, any effort to counteract climate change will be beneficial. Especially to the biodiversity global warming can be considered more of a danger than biofuels in such areas.

The development of biofuels will bring direct opportunities to developing countries through the production of local jobs – from growing raw materials to their manufacture. Furthermore, the local production of biofuels<sup>1</sup> in developing countries will help to decrease the dependency on costly fossil fuel imports. Industrialized countries must be prepared to set up strong regulatory frameworks (such as sustainable production certification schemes) together with their local counterparts which can support sustainable development for these countries and prevent unsustainable cutting of rain forests and similar high carbon habitats.

## 1. Do biofuels increase the incomes of the rural poor in developing countries?

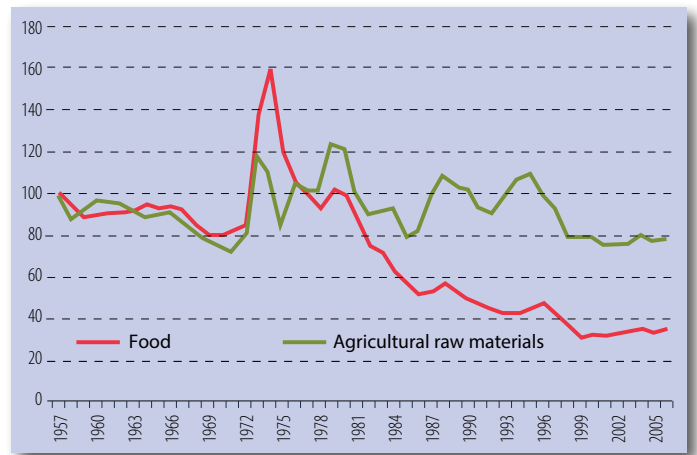
The World Watch Institute<sup>2</sup> has found that higher commodity prices increase farmer income. In the past, agriculture price rises in OECD countries have been sharply lower than inflation. This means that producers in developed countries could only survive by virtue of market distorting subsidies and the creation of import barriers for competing products from developing countries. The price increases in grains – primarily cereals – is benefiting producers in developing countries, which represent more than 60% of the population in south Asia and sub-Saharan Africa. Concern does remain for the urban poor who are not farmers and the rising food prices may have to be regulated by the local governments.

The recent United Nations Report (Sustainable Bioenergy, a Framework for Decision Makers (2007)<sup>1</sup> has examined the implications of bioenergy on agro-industrial development and job creation. The report found that “*successful bioenergy industries bring significant job creation potential. . .*” and continues “*Because the vast majority of bioenergy employment occurs in farming, transportation and processing, most of these jobs would be created in rural communities where underemployment is a common problem.*”

Energy crops often represent a diversification for ‘cash crops’ for subsistence farmers. The UN’s Report on Sustainable Bioenergy<sup>4</sup> cites the benefits especially of second generation fuels which the UN believes will “create higher-value co-products (and thus greater wealth generation)”. First generation crops are already creating real value for rural economies in the developing world by producing crops which can be used for biofuels.

The UN's Report on Sustainable Bioenergy<sup>5</sup> notes that there is an incentive for governments to support small scale bioenergy producers because "governments tend to get higher returns on investments by fostering small scale production due to the lowered demand for social welfare spending and the great economic multiplier effects incurred where money is earned and spent by community members who obtain new or higher paying jobs or businesses."

*The price of food has dramatically fallen, even as the cost of raw materials has risen or stabilized. Source: IMF<sup>3</sup>*



## 2. Will the number of jobs increase in rural areas – limiting rural to urban migration?

The only way to stop flight to the cities is to create a successful rural economy. As rural jobs increase, the poor will be less likely to migrate from rural to urban areas – urban areas in less developed countries (LDCs) have long been synonymous with urban poverty, lowered life expectancy and increased health risks.

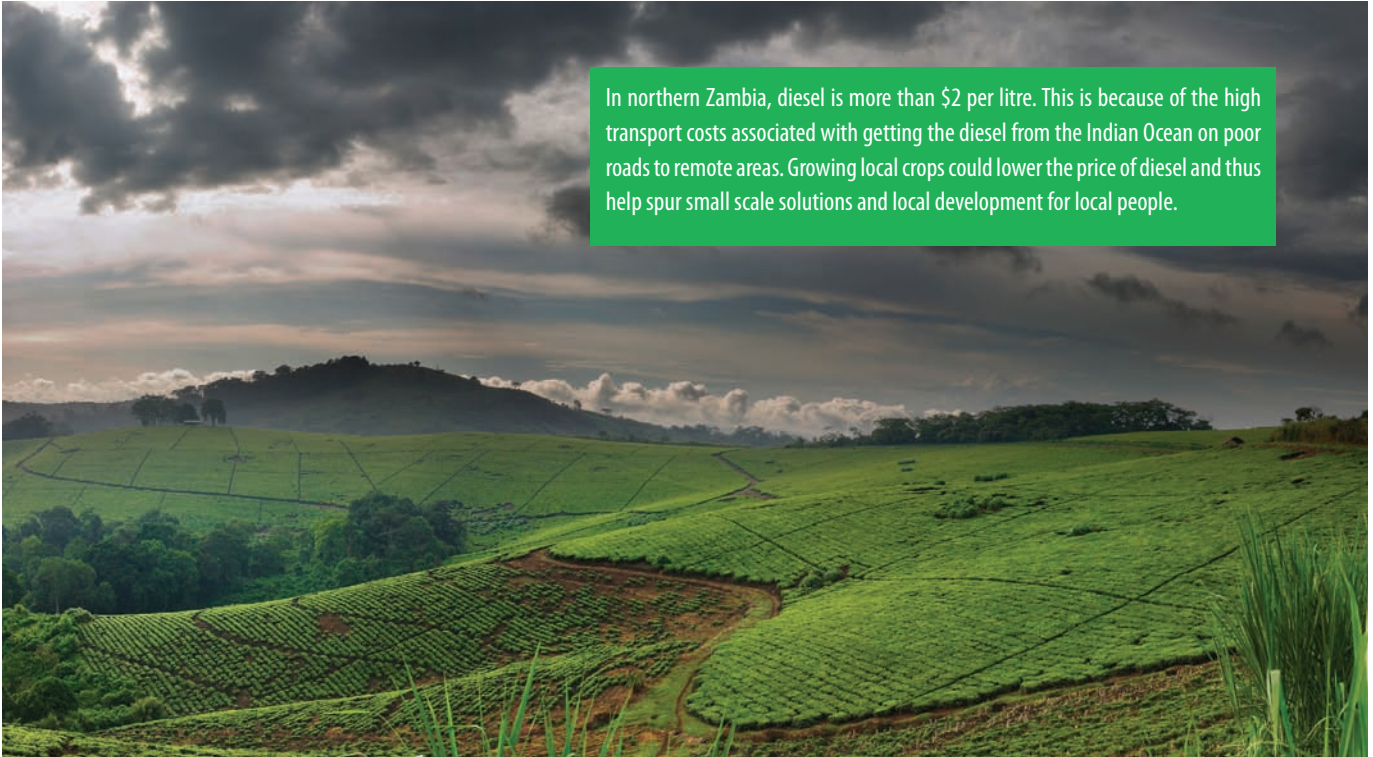
Biofuels will also lead to the creation of jobs and a stronger economy in rural areas as biomass conversion, which will happen in biorefineries on a large-scale, will need to occur near to a production zone.

"Decades of declining agricultural prices have been reversed thanks to the growing use of biofuels," says Christopher Flavin, president of the Worldwatch Institute. "Farmers in some of the poorest nations have been decimated by U.S. and European subsidies to crops such as corn, cotton, and sugar. Today's higher prices may allow them to sell their crops at a decent price, but major agriculture reforms and infrastructure development will be needed to ensure that the increased benefits go to the world's 800 million undernourished people, most of whom live in rural areas."



As production surpluses are reduced in OECD countries there will be less 'dumping' of cheap agricultural commodities in developing countries. The UN reported that "As biofuels absorb crop surpluses in developing countries, commodity prices will rise, increasing income for farmers in poor countries"<sup>6</sup>. This will lead to more economically sustainable agriculture and prices in most developing countries, encouraging local production and allowing farmers to live from production.

Biofuels production may have caused increased volatility in food prices in the short term but they are also giving price signals to farmers to start producing more. Indeed, while long run prices are expected to stabilize, volatility could cause more harm to the poor who are typically less able to adjust in the short term. Governments will need to take measures to help food prices develop<sup>7</sup> in a controlled manner.



In northern Zambia, diesel is more than \$2 per litre. This is because of the high transport costs associated with getting the diesel from the Indian Ocean on poor roads to remote areas. Growing local crops could lower the price of diesel and thus help spur small scale solutions and local development for local people.

### 3. Why is development of local energy sources so important for growth in developing countries?

No country in modern history has reduced poverty without massively increasing energy use. Transport and energy development are key to economic development. The problem is that, typically, countries must import oil for energy, leading to a negative trade balance, which can lead to excessive borrowing, inflation and exchange rate devaluation.

Many countries, such as Brazil have experienced a negative trade balance because of the need to import oil. It is thus essential for countries to seek local solutions. Brazil, for example, which is one of the largest ethanol producing countries today, has put in place long-term programmes to develop biofuels production as an alternative to oil. Though the industry is dominated by large corporations in Brazil, the UN report on bioenergy notes that farmer cooperatives also play a role and bring benefits to smaller farmers.

Malaysia has recently encouraged national industries to develop biodiesel production for internal use instead of exporting mostly palm oil. However palm oil prices have risen dramatically leaving Malaysian biorefineries without oil for domestic production as they cannot afford the current price. The price increase was not due to biodiesel production in Europe or US, which represents less than 5% of palm oil use, but rather by the change in health policies in the EU and US aiming at reducing trans-fatty acids content in food, inducing a substitution of soy oil for palm oil in food products.



### 4. How can biofuels be part of an economic “toolbox” to alleviate poverty?

“Trade, not aid” is a slogan often used today – what it really means is the importance of providing farmers with tools they can use to serve new markets and increase their income potential. Non food crops for biofuels can contribute to diversifying farmers’ production with ‘cash-crops’ and provide them with an income, even on a very small scale, in a similar way that crops grown for fibers have done in the past.

With regards to the potential for poverty reduction or exacerbation, biofuels rely on many of the same policy, regulatory or investment shortcomings that impede agriculture as a route to poverty reduction. Since many of these shortcomings require policy improvements at a country level rather than a global one, country-by-country analysis must be carried out to define the best suited energy solution and the potential poverty impacts of biofuels. This would mean, among other things, land administration systems, market coordination and prioritising investment in biofuel, as this generates more labour, has lower transportation costs and uses simpler technology.

Researchers at the Overseas Development Institute have argued that biofuels could help to reduce poverty in the developing world, through increased employment, wider economic growth multipliers and energy price effects. However, this potential is described as ‘fragile’, and is reduced where feedstock production tends to be large scale, or causes pressure on limited agricultural resources: capital investment, land, water, and the net cost of food for the poor.



#### References and Further Reading

- 1 UN-Energy, Sustainable bioenergy: A Framework for Decision Makers, 2007 <http://esa.un.org/un-energy/pdf/susdev.Biofuels.FAO.pdf>
- 2 Worldwatch Institute, Food and fuel: Biofuels Could Benefit World's Undernourished, 2007. <http://www.worldwatch.org/node/5300>
- 3 International Monetary Fund, World Economic Outlook, 2006 <http://www.imf.org/external/pubs/ft/weo/2006/02/>
- 4 UN-Energy, Sustainable bioenergy: A Framework for Decision Makers (p.24), 2007 <http://esa.un.org/un-energy/pdf/susdev.Biofuels.FAO.pdf>
- 5 Ibid p. 28
- 6 UN-Energy, Sustainable bioenergy: A Framework for Decision Makers (p.33), 2007 <http://esa.un.org/un-energy/pdf/susdev.Biofuels.FAO.pdf>
- 7 Ibid (p. 34)

Other factsheets in the series available on: [http://www.europabio.org/Biofuels/Biofuels\\_about.htm](http://www.europabio.org/Biofuels/Biofuels_about.htm)



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