

This response was submitted to the consultation held by the Nuffield Council on Bioethics on *New approaches to biofuels* between December 2009 and March 2010. The views expressed are solely those of the respondent(s) and not those of the Council.

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QUESTIONS ANSWERED:

Question 1

ANSWER:

As the Working Party is well aware, biofuels provide a timely opportunity to help contribute towards urgent issues relating to both climate change and energy security. The greatest additional opportunity that they provide, and which is often understated amidst the charged debate over the food-versus-fuel problematic, is the potential for poorer countries (which are often those countries that will play a key role in growing biofuels) to make developmental gains. This opportunity needs to be carefully planned so that policy benefits the poor as well as the elites in developing countries.

Question 2

ANSWER:

In relation to developing countries, the most important ethical challenge raised by the prospect of future generation biofuels is the 'food-versus-fuel' problematic (discussed later), which is inextricably bound with most of the other issues discussed in this consultation document.

Question 3

ANSWER:

As a researcher for a DFID-funded Research Programme Consortium known as PISCES (Policy Innovation Systems for Clean Energy Security), I am reasonably well informed of the general debates surrounding biofuels in the developing country context. My information is obtained from a general field experience of the socio-economic situation in Kenya and Tanzania, a desk study for two forthcoming publications* that I draw on for my replies here, and the ongoing policy environment in these countries. * Molony, T. and Smith, J. (forthcoming) 2010 'Biofuels, Food Security and Africa'. *African Affairs*, 109 (435), pp.tbc; Molony, T. and Smith, J. (forthcoming) 2010 'Biofuels in Africa: Growing complexities'. In *Africa Energy Yearbook 2010*. London: EnergyNet, pp.tbc.

Question 4

ANSWER:

At this early stage of biofuels development in East Africa, the most important factors driving the successful development of biofuels in Kenya and Tanzania – and, I suspect, in many countries in sub-Saharan Africa – are those that seize the opportunity for economic development in developing countries, and the associated gains that should accrue with comprehensive development-orientated policies. Moves can be made towards treating the poor fairly through considered, consultative national and local policies that should address many of the issues raised in this consultation paper. Of particular concern are regulation and transparent revenue dispersal. Policy Working Groups, such as those that have recently been created in Kenya and Tanzania (with support from PISCES – see Question 3), are going some way towards creating policies that are fairer to all.

Question 6

ANSWER:

Domestic production of energy is ideal where the resources permit this, but biofuel resource-poor countries will still often have to rely to some extent on external sources. In cases where options are limited, a diverse mix of sources is the logical – and sometimes only – solution. Poorer countries with tropical climates that are suitable for producing biofuels at scale should be careful to ensure that their own

domestic demands are met before satisfying northern demands. The risk is that a country such as Tanzania, for example, which currently spends US\$ 1.3-1.6 billion per year (some 25 percent of its total foreign exchange earnings) on oil imports, does not continue to import fossil fuels without making greater gains through its biofuel exports. The calculations should also take into consideration future domestic energy expenditures, which for many developing countries are increasingly rapidly. Fossil fuel exporting poor countries with tropical climates should also use this opportunity to diversify their economies. Nigeria, Angola, Algeria, Libya and Equatorial Guinea are obvious examples here.

Question 7

ANSWER:

Cultivation of biofuels may be instrumental in economic development and long-term poverty reduction in developing countries that have a high dependence on agricultural commodities, with benefits in the form of employment, skills development and the nurturing of secondary industries. If developed correctly, there may be real opportunities to bring sustainable benefits to countries and communities that invest in biofuels production. A recent study from Tanzania, for example, shows that with due recognition of local contexts biofuel companies using outgrower and other contracted smallholder arrangements have little direct negative impacts on land access and represent a more positive model for the environment and local livelihoods.* The employment opportunities range from highly skilled science, engineering and business-related jobs, to medium-level technical staff and unskilled agricultural work in farming, transportation and processing in rural communities. These opportunities are often associated with large-scale plantations owned by private companies that aim at gaining economies of scale, but which are sometimes accused of displacing people and of poor labour conditions. There are certainly likely to be tradeoffs between the types of jobs created and lost, and the backgrounds of the people who stand to gain or those who have the most to lose. Large-scale and small-scale biofuels production can co-exist and even work together to maximise positive outcomes for rural development. The technologies involved in modern biofuels production are basically simple oil-pressing and alcohol distillation processes that are well known at the village level and are easily replicable. Foreign firms can contract local small farmers to grow crops for them, providing farmers with more security and predictability than from simply selling crops on open markets. Price squeezes by middlemen or large-scale processors will probably still apply, however, and small-scale farmers may need to form commodity associations and cooperatives to protect themselves. New pro-poor contract-farming relationships are emerging that may better serve small-scale farmers, but these will only succeed if they are designed to be cost-effective and competitive. It is likely that there will need to be strong and thoughtful state regulation if biofuels are truly to be pro-poor. * Emmanuel Sulle and Fred Nelson, 'Biofuels, Land Access and Rural Livelihoods in Tanzania' (IIED, London, 2009).

Question 14

ANSWER:

The issue of foreign companies now rapidly acquiring vast tracts of agricultural land in poorer nations, especially in Africa, to grow biofuels (and food, which is of course related) for their own consumption, have raised accusations of 'neo-colonial' behaviour. Daewoo Logistics of South Korea, for example, has recently leased 1.3 million hectares of farmland – about half the size of Belgium – from Madagascar's government to farm maize and palm oil, although the status and details of this agreement are currently unclear and obscured further by political violence in the country, in which rhetoric to the supposed land deal has been employed by the main opposition group. At the same time as trying to manage the political fallout in Madagascar, South Korea is now negotiating the acquisition of 100,000 hectares of farmland with the Tanzanian government – who are also being courted by a United Arab Emirates company seeking a lease on farmland for rice cultivation to help secure food supplies for Gulf countries. Elsewhere in Tanzania foreign companies are growing sugar cane for bioethanol so that European countries can meet their European Union targets. Where competing resource claims exist among local resource users, governments and incoming biofuel producers, these 'land grabs' can further marginalize the rural poor who rely on it for their livelihoods. In some cases the agreement is to grow biofuels on 'idle' or 'marginal' land under the assumption that the unoccupied land is never used, which ignores groups such as

nomadic herders who depend on land at certain times of the year. Those with a more permanent presence on the land are also at risk since they generally have little negotiating power against large private entities. Under pressure from powerful forces offering comparatively large amounts of windfall cash, poor farmers may be tempted to sell their land at low prices or, where land is de jure owned by the state, may find that their land is simply allocated to investors.

Question 18

ANSWER:

Food security is particularly profound in African countries, and the rising demand for biofuels has sparked a debate over the threat that energy security poses to food security. There are three main (interrelated) threads to what has become known as the 'food-versus-fuel' debate. The first is that there is less food available to eat because crops that would otherwise be used for human consumption are being diverted for processing into biofuels – usually for transportation. The second thread is that demand for biofuels has increased competition for land and water resources that would otherwise be used for cultivating edible crops (and which also runs the risk of heightening conflicts over water use, particularly in Africa's drier areas). A result of these two concerns is the third contention, that more production of biofuels will force food prices up and make it more difficult for poor people to purchase food.

Question 20

ANSWER:

A recent study by Oxfam provides evidence to suggest that while poorer communities have benefited from investment in ethanol production from sugar, other problems have arisen over access to land and poor labour conditions.* * Oxfam, 'Another Inconvenient Truth: How Biofuel Policies are Deepening Poverty and Accelerating Climate Change' (Oxfam, Oxford, 2008).

Question 21

ANSWER:

In many African countries the capacity of the public sector to invest in, and run, operations alone is poor. The state will usually – and probably rightly so – be reluctant to give the private sector complete control over operations. Joint ventures with investors are taking off across the continent. In an initiative that is touted to boost the livelihood of 5,000 smallholder farmers through contract farming, the Mozambique government has teamed with the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) and Rusni Distilleries Ltd, a private Mozambican company. Their US\$30 million investment will establish a facility capable of producing 100,000 litres of sorghum ethanol annually. Similar partnerships are being set up in countries such as Angola, Ethiopia, Mali and Tanzania, to name but a few, showing promise for a possible middle way whereby African governments encourage business models that bridge large and small enterprise.