Response to
Public Consultation Exercise
Energy and Transport Directorate-General, European Commission
On Biofuel issues in the new legislation on the promotion of renewable energy

June 2007

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An African Response to EU Biofuels Targets

Question 1 *"How should a biofuel sustainability system be designed?"*

There is no satisfactory sustainable biofuel system possible, on the scale required. In effect, there is not enough land at current consumption rates to provide for the European Union's energy needs. Policy makers in both the developed and developing worlds should look for solutions which are inherently sustainable, such as wind and solar energy, rather than trying to make biofuels sustainable, which we know are neither sustainable nor energy efficient. There are currently no internationally agreed definitions of "sustainable biofuels", and even if there were, any certification schemes might be argued to be illegal barriers to trade.

However "sustainable biofuels" come to be defined, there can only be a limited amount that can ever be genuinely sustainable. To meet projected targets, biofuel production will be inherently unsustainable, due to the necessary changes in land use and food supplies that will result from providing enough biofuels to meet increased targets.

In an African context, we believe that the only genuinely "sustainable biofuels" will be those that involve crops that can be integrated into current farming practices, and do not displace or compete with any land or food crops. From our perspective, the only sustainable biofuels can be those that are produced for household, local or domestic use, in order to meet the energy needs of the poor. To us, the production of large-scale biofuel crops for export will inevitably displace our agriculture, and therefore cannot be sustainable.

In order to meet the biofuel needs of the EU, the conversion of land to provide the scale of biofuel crops required, is likely to significantly influence land use policies, and to have negative socio-economic and environmental impacts.

Studies show that biofuels are not sustainable or viable energy wise or land wise. See the studies:

LESSON FOR AFRICA? BIOFUELS ARE NOT ENERGY EFFICIENT AND DO NOT BENEFIT THE LOCAL FARMERS

In a study done by Pimentel and Patzek at Ivy League University Cornell in 2005 demonstrated that turning plants, such as corn, soybeans and sunflowers into fuel uses much more energy than the resulting ethanol or biodiesel generates. "There is

just no energy benefit to using plant biomass for liquid fuel," said Pimentel, professor of ecology and agriculture at Cornell. "These strategies are not sustainable." Biofuels are a self-defeating strategy, the numbers show: “Ethanol production using corn grain required 29% more fossil energy than the ethanol fuel produced. Ethanol production using switchgrass required 50% more fossil energy than the ethanol fuel produced. Ethanol production using wood biomass required 57% more fossil energy than the ethanol fuel produced. Biodiesel production using soybean required 27% more fossil energy than the biodiesel fuel produced (Note, the energy yield from soy oil per hectare is far lower than the ethanol yield from corn). Biodiesel production using sunflower required 118% more fossil energy than the biodiesel fuel produced.” Pimentel outlines that the US government spends more than $3 billion a year to subsidize ethanol production when it **does not provide a net-energy balance or gain and is neither a renewable energy source nor an economical fuel**. The vast majority of the **subsidies do not go to farmers but to large ethanol-producing corporations**.

“Ethanol Production Using Corn, Switchgrass, and Wood; Biodiesel Production Using Soybean and Sunflower” David Pimentel and Tad W. Patzek Natural Resources research Volume 14, Number 1, March 2005 pp 65-76

BIOFUELS AND THE DESTRUCTION OF GOOD CARBON SINKS AND REQUIRE TO MUCH LAND TO BE SUSTAINABLE

In the article by MacKinnon released on the 4th of April 2007 in the Guardian, he announces the disasters linked to biofuels. He says: “The numbers are damning. Within 15 years 98% of the rainforests of Indonesia and Malaysia will be gone.” He explains that forests are being torn down in the rush to boost palm oil production at the detriment of efficient carbon sinks. He quotes Willie Smits: "When you look closely the areas where companies are getting permission for oil palm plantations are those of high-conservation forest,” Smits set up SarVision, a satellite mapping service that charts the rainforest's decline. "What they're really doing is stealing the timber because they get to clear it before they plant. But the timber's all they want; hit and run with no intention of ever planting. It's a conspiracy." Researchers from the Dutch pressure group Wetlands International found that as much as **half the space created for new palm oil plantations was cleared by draining and burning peat-land, sending huge amounts of carbon dioxide into the atmosphere.**

“The sodden peat of central Kalimantan acts as a vast organic sponge that stores huge amounts of carbon. But as it dries while being drained for plantation, or by roads being cut through to remove timber, it releases the stored carbon. In Indonesia alone, **the peat releases 600m tones of carbon a year**. Worse, it is often set alight to speed clearing, adding to the CO2 from the huge forest fires that blanket much of south-east Asia in haze. Estimates say **Indonesia's fires generate 1,400m tones of carbon dioxide each year,** pushing it to the world's third-largest producer of CO2 from 26th, if both factors are considered**”**

“Palm oil: the biofuel of the future driving an ecological disaster now“ Ian MacKinnon in Kalimantan Wednesday April 4, 2007

If the UK is serious about mitigation GLOBAL climate change in an effective way, it should consider the emissions it is responsible for as a nation, especially (in) directly encouraging biofuel use abroad. The UK should stop its development and usage of biofuels or include the emissions in its targets if it wants to bring real change.

Question 2: ***"How should overall effects on land use be monitored?"***

We must consider the risks involved in the effects on the land. There will be effects on the land, whether we monitor them or not. Thus, we must not encourage the development of biofuels (sustainable or not) if we are serious about protecting land.

Large-scale biofuels developments elsewhere in the world also hold valuable lessons: The destruction of the Brazilian Amazon and Pantanal for soya and sugar cane plantations; the appalling conditions, sometimes comparable to slavery, of many sugar cane plantations in Brazil; the destruction of the Indonesian rainforests for palm oil; the rising price of grain in Mexico due to its consumption for US ethanol, leading to hunger and riots. We believe we have every reason to expect similar developments in Africa.

The issue of climate change is serious, and we in Africa know this more than most. We agree that action by industry and transport in the EU is necessary. However, we urge you to consider the socio-economic and environmental impacts that a large-scale promotion of biofuels will have on Africa.

The Stern Report commissioned by the UK government last year, states that 25% of global CO2 emissions come from deforestation. Therefore any biofuels projects that accelerate deforestation must not be allowed to pass themselves off as environmental solutions to climate change. Forests maintain water cycles and climates, both locally and globally. They are the home to the world's diversity of species and the reference point for thousands of indigenous cultures and livelihoods around the world.

The biodiversity and livelihoods of Africans should not be considered expendable for the cause of climate change solutions. The examples that we cite here from Africa and elsewhere in the world are likely to be just the beginning of growing and accelerating trends. These trends will put serious pressure on African communities to change the crops they grow, their access to land, food and forests, while our wilderness and forest areas are sacrificed. If Africa is to attempt to meet the vast energy requirements of the EU, then these impacts will be enormous.

We need to make sure we are aiming for NO land-use changes. In effect, the best way to absorb the excess GHGs in the atmosphere at the moment is through the best carbon sinks – the indigenous forest systems already existing. The best carbon sinks are being destroyed for biofuel plantations. We note that "sustainability" is not only about carbon. Biodiversity and livelihoods issues are central to these discussions too, and must not be compromised

The government should continue to emphasize the importance of forests, encourage the preservation of old forests and biodiversity. We must focus not only on CO2 emissions but make sure that the mitigation efforts do not aggravate already deteriorating situations. The earth already possesses the best natural sinks which contain and absorb CO2. Their destruction can never be replaced to their full capacity. In effect the studies show the value of biodiversity and old forests is CRUCIAL and ESSENTIAL to the mitigation of climate change and MUSTN'T be risked for the development of biofuels:

OLD FORESTS
The study done by Zhou et al in December 2006 in SCIENCE outlined that old growth forests (at least 100 years old) may store far more carbon than believed or expected. In effect it was shown that a 400-year-old forest in southern China increased its organic carbon concentration in the top 20 centimeters of the soil from about 1.4% to 2.35% between 1979 and 2003.

"Old-Growth Forests Can Accumulate Carbon in Soils," G. Zhou, et al., Science, 1 December 2006, Vol. 314, No. 5804, p. 1417.

BIODIVERSITY

The studies done by Tilman confirm the link between high biodiversity and both the stability and productivity in terms of biomass and carbon turnover of terrestrial ecosystems. The importance of biodiversity is an issue of preservation, and also an issue of better carbon sinks.

Tilman, D. & Downing, J. A. Nature 367,363–365 (1994).
Tilman, D., Wedfin, D. & Knops, J. Nature379,718–720 (1996)

Studies from Nature show "To the extent that loss of plant biodiversity in the real world means a reduction in the ability of ecosystems to fix CO2, we also tentatively conclude that the loss of diversity may reduce the ability of terrestrial ecosystems to absorb anthropogenic CO2".http://www.wrm.org.uy/bulletin/39/research1.html

The studies show how biofuels and biodiversity will compete with each other. We must make sure we maintain the sinks and ecosystems we have to avoid aggravating the climate change situation. In effect, various other reports show that "Biofuels are bad news for biodiversity"
http://gristmill.grist.org/story/2006/6/12/103838/376 12 June 2006
An that Biofuel policy will give negligible carbon cuts
http://www.edie.net/news/news_story.asp?id=11549 7th June 2006

DYNAMIC RELATIONSHIPS BETWEEN BIODIVERSTITY, LARGE FORESTS AND CLIMATE CHANGE
The study done by Webb et al in the "Proceedings of the Royal Society" show that biodiversity and preservation of existing forests is the key to better climate change mitigation but that in order to withstand the impacts of the changes already happening, the forests need to be preserved on a large scale. The recommendations of the study are that it will be profitable to promote forest conservation programs by emphasizing possible climatic as well as biodiversity benefits. This study emphasizes the dynamic relationship between climate change forest conservation and the feedbacks they have on each other.

"Coincident scales of forest feedback on climate and conservation in a diversity hot spot" Thomas J. Webb, Kevin J. Gaston, Lee Hannah and F. Ian Woodward
The Royal Society 16 November 2005

Question 3: *"How should the use of second-generation biofuels be encouraged?"*

If second generation biofuels entail Genetically Modified Organisms we would like to recommend exercising extreme caution. For example we hear that the UK government's is considering allowing Genetically Modified (GM) crops to be considered "sustainable". That would be an entirely unacceptable proposition. We feel strongly that any crop calling itself "sustainable" cannot include GM.

With the exception of South Africa, no African countries have commercialized GM crops. This is due to the serious concerns that African farmers and governments have about the impacts of patented seeds, crops that only function in association with specific chemicals, and the high risk of GM cross-pollination and contamination of local crops. Over the years, Africa has remained GM-free in the face of strong international pressure to accept GM crops. Unfortunately, biofuels may provide the entry point for GM crops into our continent, overriding the interests of African farmers and the environment.

We would also be extremely wary about any use of GM micro-organisms in the production of biofuels, due to their ability to rapidly mutate, exchange DNA and reproduce, and the difficulties in containment.

Question 4: *What further action is needed to make it possible to achieve a 10% biofuel share?*

Biofuel (agrofuel) consumption and production must be stopped, not encouraged. The risks for the environment and its inhabitants are too great. By producing and consuming biofuel from agricultural crops, we are contributing negatively to the mitigation of climate change. We cannot promote or condone biofuel use if our object is being green or sustainable. Biofuels are neither green, nor sustainable. They use more energy to make it than they produces, they risk destroying and opening up carbon sinks such as forests and biodiverse ecosystems and last but not least it will cause great chaos it producing countries.

If we are able to take lessons from countries already having experienced the development of biofuels, we need to acknowledge that development of new energy sources overseas will have irreparable damage on the global climate. Using other countries to grow the EU's biofuels will increase their per capita emissions when the actual users are in the West. The best way to avoid this situation is to stop the development of the industry. If not, developing countries will bear the double burden of food competition and increased emissions (which are not even their own).

Articles and studies have been released showing that: "Growing demand for biofuels" 'could lead to food shortages' in the Telegraph 19th April 2007. Various other sources including "the Scotsman", "the Globalist" and "Euractiv" are concerned for their own food resources. According to the BBC, the USA is experiencing the same kind of competition between food and fuel http://news.bbc.co.uk/1/hi/business/6481029.stm. If even in developed countries people struggling to buy food, it is completely unreasonable to ask developing countries, some which are technically "hungry" to for go eating for our energy demand.

What we do recommend, are sustainable agriculture practices, biodiversity and forest preservation in countries at risk of becoming biofuel producers. We need to

recognize that they comport some of best sinks (old forests and biodiversity). If our challenge is mitigating climate change effectively, we must do so in the best way possible which remains preserving indigenous methods and biodiversity which exist on the field and have been shown to be the most “carbon neutral” and invest in renewable energy sources such as wind and solar power sources.

Summary and Conclusion

- We ask you to consider the impacts that raising EU biofuels targets will have on African rural communities, remembering the scale of land that will be required to meet your energy needs.

- In particular, we are extremely concerned about pressures for changes in ownership of land and privatization. The land for large-scale biofuel production must come from somewhere, whether from small farmers’ land, communal land or conservation areas. There is no free land in any of our countries, so communities will inevitably be displaced and denied of their land, territories and natural resources.

- To reduce climate change, we remind policy makers that climate change is not just about carbon dioxide as an indicator. Biodiversity and livelihoods issues must be considered as part of any successful climate change strategy, or you face unacceptably high costs that render the strategies counter-productive.

- There will be a limit to the amount of agricultural biofuels that can be produced in a genuinely sustainable manner. Beyond a certain amount, the necessary changes in land use will inevitably bring about harmful socio-economic and environmental impacts.

- We fear that definitions of “sustainable biofuels” will be based on decisions of political convenience, and not on science or socio-economic expertise. We therefore advise against placing too much trust in the term “sustainable biofuels” and expecting that the EU’s extensive biofuel demands can be met sustainably.

- Furthermore, if trade considerations ultimately prevent from requiring “sustainable biofuel” standards anyway, then raising biofuel targets will mean that you are knowingly signing away our rights, lands and communities.

We ask you to refrain from increasing the EU’s biofuel targets as a quick-fix replacement to fossil fuels. Instead we urge the EU government to consider solutions that can increase localization and energy efficiency, to support genuinely renewable options, and to reduce unnecessary transport, industry and packaging.