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Sustainable Bioenergy: Challenges and Opportunities

Moustapha Kamal Gueye Panel Presentation

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Moustapha Kamal Gueye: My regards, Mr. Chair. I want to start by thanking the UN Foundation and German NGO forum for having ICTSD as a part of this process. We are very excited with the work that we are doing on trade and sustainable energy and to be able to contribute to this very important meeting. My presentation will first explore to economic significance of bioenergy before touching upon key social and environmental concerns that relate to production and international trade in bioenergy.

38 out of the 47 of the world's poorest countries that are net oil-importing countries. Twenty-five of these countries import all the oil that they consume. Yet many of these do have the potential for energy generation through biomass, through bioenergy. The interventions that we have heard yesterday indicate that depending on different types of agricultural management systems and practices, there is tremendous potential for production and international trade for many of these least-developing countries I referred to earlier.

So this is clearly the reason why we need have an agenda on biofuels. Governments around the world have already started to put in place policies and strategies on bioenergy, including in all developing country regions - in Asia as well as in Africa and America. Now, looking at the environmental side of these, clearly we see a tremendous contribution of biofuels in terms of reduction of greenhouse gas emissions. We have heard yesterday that there is a potential of GHG reduction up to a 100 percent, depending on feedstock choice, production system, any fuel input.

The overall energy balance of biofuels appears to be positive in most cases, but depends on the type of feedstock and fuel input in the production process. A study recently undertaken by researchers at the University of Minnesota University indicates that there are significant differences in terms of GHG and energy balance between biofuels produced from soybean and corn.

Now turning to some of the social impacts, in particular in terms of employment generation, we are seeing positive impacts in Indonesia and Brazil. Half-a-million people in Brazil are employed in the biofuels industry. In the context of Africa, it is reasonable to assume that a potential for employment generation exists. Biofuels could play a

significant role in the context of rural employment and economic revitalization.

But yet there are a number of environmental concerns. Some of the most significant issues that I would to underline relate to soil erosion, water, air pollution, chemical contaminants, monoculture, and deforestation. Let's take for example the case of have here methods of production that lead to the most environmentally negative impacts relative to any other crop.

A very important issue to factor in is the impact biofuels production may have on food security. It is critical the face and be cautious about a potential competition between energy security and food security. 90 percent of food consumed worldwide comes from cereal grains, including corn and over 800 million people that are still affected by malnutrition.

This is the case particularly in Sub-Saharan Africa which not only faces shortages in local food production, but also heavily depend on food imports. Therefore, we need to be very careful about producing biofuels from food crops. We have already seen changes in the prices of food crops in the United States and we can expect to have a significant impact on some of these countries in Sub-Saharan Africa that are net food importers.

On the economics, we are not very sure which is the least-cost option in terms of reduction of greenhouse gases. Some of the early assessment that have been done indicate that for many of the environmental indicators such as use of pesticides, water requirement, and CO2 emission, biofuels may not be a significantly better alternative to fossil fuels. I see there is a need for better research and need for better understanding. In that research assessment tools such as life cycle assessment could play an important role.

Given the huge global demand for energy, it is clear that such a demand will not be met by means of energy sources such as biofuels. However, unless proper safeguards are put in place to ensure sustainable levels of production, incentives could be high to produce by all means, which could lead to serious environmental and social damage.

Production standards and certification schemes may be needed in that respect. But the question remains open as to which criteria should guide the development of certification of biofuels in order to promote sustainability without creating unnecessary hurdles to producers. Social and environmental criteria could relate to GHG and energy balance, deforestation, biodiversity, the social side of it, employment, child labor. All these would allow us to have a

better understanding of what would be a maximum and sustainable level of production.

International trade in biofuels is currently very limited but will certainly grow rapidly. Earlier today we heard some of the key issues that would relate to trade from the presentation of Mr. Singh of the WTO.

Some of the important issues that I would like to touch upon are issue of market access and the question of subsidies. We have a great opportunity with the ongoing negotiations for the liberalization of environmental goods and services under paragraph 31.3 of the Doha Ministerial Declaration. Biofuels are being discussed in various negotiating committees. Ethanol is considered in the negotiations on agriculture while biodiesel is being addressed in the discussions on non-agricultural market access. It remains to be seen if both will be include in the category of so called environmental goods and services.

Analysis undertaken by ICTSD and its partners on the liberalisation of environmental goods and services indicates that some of the most important benefits from developing countries in the negotiations of environmental goods and services will come from what is being referred to as environmentally preferable products, which could include biofuels.

Clearly there are new development opportunities especially for developing countries. But for that promise to be realized, we need to think of addressing some of the distortions that may affect production and trade of biofuels.

WTO reports indicate that in 2003 21 developed countries spend about \$250 billion in subsidies. There already are huge amounts of subsidies that go into agriculture. This is critical because most of these subsidies would go into crops that are also feedstock for biofuels - corn, soy, sugarcane etc. This is very clear when taking a look at the sectoral distribution of the Aggregate Measurement of Support (AMS) - which relates to the most production and trade distorting types of subsidies.

Unless a proper and serious reform of subsidies is undertaken, the global market for biofuels will be as distorted as the market for agriculture.

The problem is that most biofuels are not cost competitive and some form of support may be necessary. A recent report by the FAO and OECD states that at present, very few countries are able to produce biofuels in any cost competitive manner without some form of subsidy. The challenge therefore is to find a balance whereby we could "seed the dynamics without distorting the market". This certainly is a challenging task, especially given that negotiations at the

WTO have collapsed primarily due to disagreement on agriculture.

There are concerns in trade circles that countries will attempt to reform subsidies simply by repackaging illegal subsidies into the so called green box - which are supposed to be those subsidies with no or minimal impact on production. Is trend is already discernible. While subsidies in the so-called Amber and Blue boxes have gone down, green box subsidies have been increasing over the past few years.

I will end with some of the issues that appear to me as critical if we are to advance a sustainable bioenergy agenda. First, we need to speed the transition to second-generation biofuels that would allow us to avoid issues of energy-food competition. We need safeguards in relation to environment and land use, forest and biodiversity. We need to facilitate and discipline international trade. We might consider standards and certification, but make sure that criteria are fair and relevant and that the process of developing certification is inclusive and participatory.

Thank you very much for your attention.