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The role of sustainable biofuels

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Dear colleagues.

It is a great pleasure for me, to debate with you about the sustainability of Biofuels today.

Biofuels are very important to reduce the problems of climate Change and oil shortages especially in transport sector. But biofuels alone cannot solve the problems. Energy efficiency in transport sector is very important. The best strategy for efficiency is, to end the use of combustion motors and to

switch to electric vehicles, supported with renewable electricity. Electricity motors are much higher efficient, than combustion machines. The use of renewable electricity in transport sector reduces the need of fuels, of mineral oil and of biofuels.

Biofuels hit the headlines in the recent past. Reasons for that are the often applied non-sustainable cultivation methods. The problems of an intensive agriculture: mineral fertiliser, pesticides, genetic modified plants, soil erosion and decrease of soil fertility increasingly appear in connection with biofuel production. At the same time non-sustainable plantations displace natural landscape areas: Mainly in Indonesia rainforest areas are deforsted for palm-oil plantations and production of paper and fodder.

The intensification of global hunger and the increase of socially inequitable structures through the increasing biofuel

production is also discussed intensively at the moment. It is true, the mentioned problems exist and their intensity grow the more biofuel-units are produced non-sustainable. However, these problems also increase as a result of non-sustainable cultivation of foods, animal feed and other renewable primary products. Problems of intensive agriculture are not solely problems of biofuels cultivation.

A meaningful reason for the destruction of natural landscape areas (especially of primeval forests), for the climate change, for social inequity and even for wars lies in the usage of fossil and nuclear resources, particular in the usage of mineral oil. Widespread across the Amazon Basin rainforests have been destroyed through mineral oil production. The rainforest in South-America is especially threatened through climate change at the moment. Which in turn is caused particularly through CO2-Emission, first of all by the usage of fossil

resources, especially oil. If the usage of mineral oil won´t be stopped, these problems will get worse

This perception about oil should not excuse the problems of a non-sustainable cultivation of biofuels. But it is important to allude to the fact, that the problems, like rainforest deforestation, climate change and social injustice, which are accused to biofuels are caused even more by the usage of mineral oil or the cultivation of fodder

The problems of an intensive agriculture, surface rivalry and destruction of natural landscape areas, which are caused by non-sustainable cultivation of biofuels, can not be solved by prohibition of biofuels. Appropriate claims, in example the overall prohibition of palm-oil impots, have been requested to quick.

Crucial are activities, which affect the problem´s main reasons. An ending of the usage of oil is as well as important as the reduction in meat consumtion.

The situation is similar with the global hunger problem. Food lacks are not due to insufficient cultivable land, but have various reasons. In example allocation problems, destruction of food by bugs, increasing monopolisation of seed producers, degradation of grounds by the intensive agriculture of food production, reduction of usable agricultural area through climate change (especially floods and expansion of deserts) and increasing of bad harvests. The latter has its main reasons in the intensive usage of fossil resources, which cause the highest CO2-Emission.

With an allover prohibition of biofuels, we also lose the advantages of sustainable cultivated biofuels. Sustainably cultivated biofuels are CO2 –neutral and thereby help to fight

climate change. Biofuels provide energy especially for the transportation sector. By the increasing shortage of oil, more and more supply shortfalls will occur. Increasing prices for energy will incrementally cause social problems. Sustainably cultivated biofuels can make a contribution to the development of rural regions, enlarge biodiversity on acres, maybe protect and, by repress of the desert, even create new natural landscape areas. They can also improve the incomes of farmers and thereby make a contribution to fight against poverty.

An overall prohibition of biofuels would disregard the advantages which sustainable cultivated biofuels are able to provide, i.e. climate protection, energy supply and increase of biodiversity.

The only way to make use of this opportunity and avoid the risks is clear: Sustainability of cultivation of biofuels has to be

politically enforced. This goal should even not only be aspired for biofuel, but for the whole agriculture, as well as for food and fodder production.

The outcome of this is, that particularly for internationally traded biofuels a certification system is necessary, which has to bring consistent and traceable proofs, that the traded biofuels have been cultivated and produced sustainably.

As much as international traded food like „Fair Trade“ and traded wood with seals like FSC, we need to develop and establish a certificate for biofuel and other bioenergies as quickly as possible.

The opinion that these certificates could not stop the negative development of biofuel intensive agriculture, are of course worthy of consideration and discussion. But it is also obvious,

that overall prohibitions of biofuel will not be enforceable, because the worldwide shortfall of oil increases the pressure on production of biofuels incrementally. Prohibitions will lead to illegal production of biofuels, with all their negative consequences on social equity, ecology and crime rate.

The only answer to this is to enforce sustainable cultivation of biofuels through powerful political action. There is no guaranty, that this sustainable path will be successful, but there is no alternative to it.

I therefore suggest, that we first of all classify them clearly: Sustainable cultivated and produced biofuels I denominate extensive biofuel, non-sustainable cultivated biofuel I denominate intensive biofuel.

Of course, boarders between both of them will be blurred. Nevertheless will a clear description of criteria ease the political work and legislative procedure. It has to be a clear political goal to support extensive biofuels and push back intensive biofuels. Political framework exists in various forms and has to be put into practice.

First we have to create a certification system for extensive biofuels. Through tax exemptions for extensive biofuels as well as admission for admixing it into mineral oil, we can create incentives for increasing cultivation of biofuels. Governmental funds for Research and Development support this path. After an adequate transition period, prohibitions according intensive biofuels can be enacted for the international trade as well as the national market.

Which are the fundamental distinctive features of extensive and intensive biofuels?

Extensiv Biofuels:

- soil protecting cultivation methods (humus increase in stead of humus decrease)
- CO2-reduction of at least 50% compared to kerosene fuel
- prevention of use of mineral fertiliser
- avoiding pesticides
- no genetic modified plants
- practice of social standards
- no exhaustive cultivation of areas of unspoiled nature (in example: no deforestation of tropical rainforests or boreal forests).
- increase of biodiversity compared with monocultures (i.e. mixed cultivation)
- observation of crop rotation
- extensive usage of devasted land
- re-planting of deserts

- regional self-supply remains
- usage of agricultural waste, biogenous residues and urban greenery
- usage of greenery from nature reserves.

Intensive Biofuels:

- cultivation set on therefore destroyed natural landscape areas (forests, swamps)
- intensive monocultures
- high usage of mineral fertiliser
- high usage of pesticides
- usage of genetic modified plants
- decrease of soil fertility (i.e. decrease of humus)
- negative climate gas balance (i.e. CO2, methane, nitrous oxide)
- disrespect of social standards
- depletion of local water resources

Examples for intensive biofuels are:

- biodiesel from intensive rape seed production
- palm-oil from plantations, which are set on therefor cleared rainforest areas
- bioethanol from agricultural crop
- bioethanol from sugar beets

Examples for extensive biofuels are:

- pure vegetable oil from mixed cropping
- bioethanol from thinning material and greenery
- palm-oil from plantations with combined forest and agriculture (i.e. with underneath cocoa planting), build on devasted land, which has been provided to farmers without land
- pure vegetable oil or biodiesel from Jatropha, a oil nut, growing in desert regions.

This totally incomplete and exemplary listing shows, that classification of intensive an extensive biofuels is not easy. Above all it uncovers, that the classification of biofuels into 1st and 2nd generation is absolutly deficient. Unfortunately this classification domitates the political debates.

The deeper reason for the classification of biofuels into 1st and 2nd generation is founded by the interests of mineral oil companies. The classification is not created by sustainability criteria, but by the possibilities of industrial production.

Most of the biofuels of the 2nd generation are not able to be produced and promoted decentrally. They therefore lead into deeper dependence on industrial production and big companies, and increase the risk of building up social inequitable structures.

Ladies and Gentleman

If the world does not go to sustainable biofuels, the problems with climate change and destroying the soil will go on. Intensive agriculture leads to these problems. We should not go to more intensive agriculture, but to a ecological agriculture even for biofuels.

The according legislative procedure should not be leaded by the interests of big companies, but by the necessity of sustainable cultivation of biofuel. I hope my suggestion to classify biofuels into intensive and extensive biofuels will expand into further political debates. The clear definition of the variety of biofuels will be an excellent foundation to create a legislative framework for sustainable usage of biofuels.

I thank you very much for your attention