



## AGROFUEL PRODUCTION

THE WORLD FOOD SITUATION, THE RIGHT TO FOOD  
AND THE IMPACT ON WOMEN

W I D E 

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Globalising  
Gender Equality  
and Social Justice

**“Agrofuel Production: The World Food Situation, the Right to Food and the Impact on Women”.**  
This analysis has been developed by WIDE Austria and made available in English by WIDE.

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## Introduction

Increasing oil prices, rising energy demands, climate change and Kyoto Protocol commitments are the causes of an emerging worldwide renewable energy boom. These renewables include agrofuels, such as agrodiesel made from rapeseed, palm oil, soybean oil or other types of vegetable oil, as well as agroethanol made from corn, wheat, sugarcane, sugar beet and other starch-containing plants. This paper aims to study the relation between the extensive cultivation of crops (staple, for the most part) for these fuels and the right to food, as well as the obligation of states to ensure food security. Moreover, we will also analyse agrofuels' real climate change mitigation potential.

## The World Food Situation

According to the UN, practically one billion people in the world are still hungry today, despite years of campaigning to fight against hunger. The financial crisis and the hike in basic food prices, partly caused by speculation, are largely responsible for the fact that there has not been much change in those figures. In February 2011, the FAO once again announced record staple food prices, such as those for cereals, meat, dairy products and sugar. This has had a severe effect on the poorest inhabitants of the world<sup>1</sup>. Between 2005 and mid-2008, the prices for wheat, corn and rice more than doubled.<sup>2</sup> According to the FAO, the 2008 record was practically reached again in February 2011. This is drastic for the poor in the South, who spend up to 60% of their income on food. The OECD and the FAO expect to see further rises in wheat and vegetable oil prices this decade. For the poor of this world, approximately 70% of which are women,<sup>3</sup> it is becoming increasingly difficult to obtain food, although it is available in more than sufficient quantities.

The FAO, however, states that global food production must go up by over 70% by 2050 (based on 2005-2007 predictions) to cater for the 9 billion people that are expected to be living at that time due to population growth.<sup>4</sup> However, no explanation is given as to why food production should have to increase by 70% - taking into account that, there is an overproduction of food- although the global population is only expected to double. A possible explanation was provided in the Global Report published by the IAASTD (International Assessment of Agricultural Knowledge, Science and Technology for Development). It states that currently, 2.3 million tonnes of grain are harvested every year – which is more than ever before – but that only 47 % of it is for human consumption. Over half of all that grain is used as animal feed, for fuel and as industrial raw materials.<sup>5</sup> Thus, the growing use of land for the production of agrofuels is definitely counter-productive.

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<sup>1</sup> <http://www.fao.org/news/story/en/item/50519/icode/>

<sup>2</sup> [http://www.welt.de/wirtschaft/article1971118/Verbraucher\\_werfen\\_Handel\\_Preistreiberei\\_vor.html](http://www.welt.de/wirtschaft/article1971118/Verbraucher_werfen_Handel_Preistreiberei_vor.html)

<sup>3</sup> According to the United Nations Development Fund for Women (UNIFEM):

[http://www.unifem.org/gender\\_issues/women\\_poverty\\_economics/](http://www.unifem.org/gender_issues/women_poverty_economics/)

<sup>4</sup> Declaration of the World Summit on Food Security, Rom, Nov. 2009,

[http://www.fao.org/fileadmin/templates/wsfs/Summit/Docs/Final\\_Declaration/WSFS09\\_Declaration.pdf](http://www.fao.org/fileadmin/templates/wsfs/Summit/Docs/Final_Declaration/WSFS09_Declaration.pdf)

<sup>5</sup> "Wege aus der Hungerkrise. Die Erkenntnisse des Weltagrарberichts und seine Vorschläge für eine Landwirtschaft von morgen", 2010, <http://www.weltagrарbericht.de/>

## Relevant International State Obligations

### *The International Covenant on Economic, Social and Cultural Rights<sup>6</sup>*

The right to adequate food is a fundamental human right.<sup>7</sup> By signing the United Nation's International Covenant on Economic, Social and Cultural Rights (ICESCR)<sup>8</sup>, most states have committed to respect this right in their own spheres of power, even if other countries are concerned. Furthermore, they have committed to actively protect this right from the abuse of third parties as well as to promote and implement it.<sup>9</sup> The Covenant was adopted in 1966 at the UN General Assembly and entered into force in 1976.

In the Covenant, the right to adequate food is understood as not only the guaranteed access to a balanced nutrition, in sufficient quantity, but also to food that is economically and physically accessible. The sustainability and distribution of natural resources must also be taken into account, so that the right to food remains guaranteed for future generations too.<sup>10</sup> Adequate food means that it should be nutritionally balanced and that its level of quality, the cultural habits of the consumers and the nutritional needs of different age groups should be considered. States that have committed to guaranteeing the right to food must therefore ensure global equitable distribution and sustainable food production practices.

### *The UN Framework Convention on Climate Change*

The UN Framework Convention on Climate Change<sup>11</sup> was adopted in 1992 in New York. Most states signed it at the UN Conference on the Environment and Development (UNCED) in Rio de Janeiro and it entered into force in 1994. It is the first international binding convention on climate change in international law. Within the framework of the Kyoto Protocol, the signatory states have committed to reducing their greenhouse gas emissions by 5.2% in total by 2012, compared to 1990 levels. The amount by which countries must decrease their emissions depends on the quantities emitted in those same countries. A total of 8% was set for the EU.<sup>12</sup> Amongst other measures, the EU is counting on agrofuels to reach this target. The argument used in their defence is agrofuels' alleged carbon neutrality, although the directives do not state the exact amount of CO<sub>2</sub> reduction that is expected. Even if this were true, it is nonetheless clear that a commitment such as climate change mitigation should not take precedence over another commitment which is just as important: food security.

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<sup>6</sup> International Covenant on Economic, Social and Cultural Rights – ICESCR

<sup>7</sup> FAO. World Food Summit. The Right to Food. <http://www.fao.org/WorldFoodSummit/sideevents/papers/Y6959e.htm>

<sup>8</sup> Signed on 19.12.1966 at the UN, entered into force in 1976. Article 11 defines the right to food as a fundamental human right.

<sup>9</sup> "States parties should take steps to respect the enjoyment of the right to food in other countries, to protect that right, to facilitate access to food and to provide the necessary aid when required." (Art. 36)

<sup>10</sup> <http://www.bayefsky.com/getfile.php/id/357/misc/general> <http://www.bayefsky.com/getfile.php/id/357/misc/general>

<sup>11</sup> The United Nations Framework Convention on Climate Change (UNFCCC) aims to slow down global warming and mitigate its effects. The most important signatories must report on facts and trends about their greenhouse gas emissions.

<sup>12</sup> <http://www.agenda21-treffpunkt.de/archiv/03/daten/kyoto-EU.htm>

## *The Convention on Biological Diversity (CBD)*

The CBD,<sup>13</sup> also known as the Biodiversity Convention, was adopted in 1992 at the UNCED and entered into force in 1993. To date, 190 states have ratified it. The aim of the Convention is to protect biological diversity, the sustainable use of biological resources and the fair sharing of knowledge about plants and their uses (e.g. in the context of pharmaceutical products). The International Treaty on Plant Genetic Resources for Food and Agriculture<sup>14</sup> lays down the framework conditions for fairness in the context of the use of and access to plant genetic resources. The Cartagena Protocol on Biosafety,<sup>15</sup> in addition to the CBD, aims to ensure the ecological and human safety of genetically modified seeds and seed material, as well as of the genetically modified plants grown from them, amongst other things. The precautionary principle is applied in this context. One source of concern is that genetic engineers will use agrofuel production to defend their position and lead to greater levels of acceptance of such techniques. Genetic engineering also represents a threat to plant genetic resources. This is because the application of genetic engineering techniques for fuel production is generally considered more acceptable than for food production. However, even in the former case, it is just as harmful for the environment and for biological diversity.

## *Labour Obligations as Defined by the ILO*

The ILO's Declaration on Fundamental Principles and Rights at Work rests on four founding principles:

- Freedom of association and right to collective bargaining,
- Elimination of forced labour,
- Abolition of child labour,
- Elimination of discrimination in respect of employment and occupation.

These principles are laid down in eight conventions and are considered fundamental labour standards. These are:<sup>16</sup>

- Forced Labour, 1930 (Convention 29)
- Freedom of Association and Protection of the Right to Organise, 1948 (Convention 87)
- Right to Organise and Collective Bargaining, 1949 (Convention 98)
- Equal Remuneration, 1951 (Convention 100)
- Abolition of Forced Labour, 1957 (Convention 105)
- Discrimination (Employment and Occupation), 1958 (Convention 111)
- Minimum Age, 1973 (Convention 138)
- Worst Forms of Child Labour, 1999 (Convention 182).

The object of ILO Conventions is to promote social justice as a fundamental condition for long-lasting world peace. To do so, economic and social policies must work hand in hand to support each other and guarantee justice, social progress and the eradication of poverty. It is also very important to take into account Convention 169 (which entered into force in 1991): it aims to protect the rights of all indigenous peoples and guarantee respect for their integrity.

The ILO's fundamental principles must be respected in the context of the production of agrofuels used in the EU.

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<sup>13</sup> Convention on the Biological Diversity – CBD

<sup>14</sup> International Treaty on Plant Genetic Resources for Food and Agriculture

<sup>15</sup> Cartagena Protocol on Biosafety to the Convention on Biological Diversity, adopted on 29.1.2000 entered into force on 11.9.2003, <http://bch.cbd.int/protocol/>

<sup>16</sup> <http://www.ilo.org/public/german/region/eurpro/bonn/kernarbeitsnormen/index.htm>

## Obligations in the Context of the EU

### *Agrofuel Admixture Commitments*

In 2003, the so-called EU Biofuels Directive (2003/30/EC)<sup>17</sup> made it compulsory for Member States to aim for a defined target of agrofuel usage for transport. Agrofuels had to account for 2% of transport fuel by 2005 and for 5.75 % by 2010. This was to be done by mixing bioethanol and biodiesel with fossil fuels. The Directive 2009/28/EC<sup>18</sup> on the promotion of the use of energy from renewable sources that came into force in 2009, amending and repealing Directive 2003/30/EC, imposed a 10% agrofuel target by 2020 on Member States.

There are far-reaching social and ecological concerns which are gradually leading to the reconsideration of these targets. In September 2008, the Committee on Industry at the EU Parliament demanded that at least 4% of the targeted 10% consist of new, second-generation agrofuels produced from crops containing high percentages of cellulose (e.g. straw, alfalfa, bark, leaves, manure)<sup>19</sup> and that electric and hybrid systems be used. 40% of agrofuels should come from sources that are not in competition with food or feed production. However, second-generation agrofuels should also be viewed critically, because biowaste also contains important nutrients that are necessary for the regeneration of soils. The production of fuel from biomass is depleting the soils from their nutrients and therefore stops them from regenerating. Consequently, this leads to an increase in the need for greenhouse gas releasing fertilisers in mass agricultural production.

### *EU Development Policy and Coherence*

Within the framework of the EU's common development policy, the EU must ensure sustainable development, a harmonious and gradual integration of developing countries into the world economy and the fight against poverty in all policies that could have an impact on these developing countries. The Millennium Development Goals (MDGs) are a fundamental international consensus in this respect.<sup>20</sup> The first of all these goals is to halve the number of hungry people in the world (most of which are women) between 1990 and 2015. The MDG Report in 2008<sup>21</sup> announced that hunger and poverty had increased instead of decreasing due to the hike in food prices. Amongst other factors, the report blames the production of fuel from food crops.

## Problems Linked to Agrofuels

### *Horrendous Price Hikes*

In 2009, approximately 1% of the world's arable land was being used to produce agrofuels. Between 2004 and 2007, 70% of the increase in corn crops was channelled into agrofuel production. This share will continue increasing. The USA, for instance, has a 30 % agrofuel admixture target for 2030. In 2008, 7% of the vegetable oil produced in the world was being used for the production of agrodiesel.<sup>22</sup> The growing demand for corn for fuel is putting pressure on other crops, especially cereals. The result: soaring staple food prices. Between January 2005 and June 2008, the price of corn tripled, which led for instance to what is known as the "tortilla crisis" in Mexico at the beginning

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<sup>17</sup> <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2003:123:0042:0046:DE:PDF>

<sup>18</sup> <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:140:0016:0062:de:PDF>

<sup>19</sup> As opposed to first-generation agrofuels, which mainly used important food crops as a raw material.

<sup>20</sup> Millennium Development Goals – MDGs

<sup>21</sup> See [www.un.org/millenniumgoals](http://www.un.org/millenniumgoals)

<sup>22</sup> Donald Mitchell, A Note on Rising Food Prices, Policy Research Working Paper 4682, World Bank, Development Prospects Group, July 2008

of 2007<sup>23</sup>. On world markets, wheat prices climbed by 127%, rice by 170%, palm oil by 200% and soybean oil by 192%. On average, the price of sugar, citrus fruits, bananas and meat went up 48%.<sup>24</sup> Since, food prices have continued rising and have reached their highest levels in decades. Further price hikes are expected. This has led to an increasing number of people not being able to afford sufficient and adequate food, not only in the South, but also in Europe.

Food security is going down the drain and poverty is on the increase. Due to their many duties and responsibilities in order to look after their families, women are hit immediately – and hard. In Indonesia, the prices for cooking oil began going up at the beginning of the biodiesel boom and have not stopped climbing because of the fast rise in world market palm oil prices. Indonesian women complain that high-quality cooking oil is becoming a rare commodity and that it is practically not affordable anymore.<sup>25</sup> In Brazil, the expansion of sugarcane production for agrofuel and the usage of grazing land to grow the crops have led to an increase of about 50% in milk prices in a very short space of time.<sup>26</sup>

### *Climate Colonialism*

The admixture targets in industrialised countries cannot be reached only by means of the import of larger amounts of vegetable raw materials. A recent study published by the Institute for European Environmental Policy (IEEP),<sup>27</sup> based in London, concluded that 44% of agroethanol and 36% of agrodiesel needed in 2020 in the EU will have to be imported as a result of the EU's Renewable Energy Directive.<sup>28</sup> In Germany, in 2009, 900,000 tonnes of ethanol were already being used for fuel (3.6% of the petrol sold), but only 590,000 tonnes were produced in the country.<sup>29</sup> To reach Austria's 10% target, 85% of the raw materials for agrofuels had to be produced abroad.<sup>30</sup>

The 27 EU states' admixture targets will require an additional 4.7 to 7.9 million hectares (47,000 to 79,000 km<sup>2</sup>) of arable land by 2020. This land, of course, will not be used to grow food crops anymore, and for the most part, they will be located in countries in the South. 4.7 million hectares represent a surface that is a little larger than the Netherlands, and 7.9 million hectares is about the size of Ireland.

Theoretically, agrofuel production could be a source of income for farmers in the South. However, large corporations grow raw materials on extensive, industrial farmland and export their crops. They falsely state that their aim is to contribute towards climate change mitigation, thus giving them a seemingly just cause for the usage of this land for crops other than food crops. The wealth generated only benefits the agricultural big business, the trading corporations and financial institutions. Farming families are pushed out, many jobs are lost and few are created, exploitative work practices become rife. NGOs criticise all this as "climate colonialism".

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<sup>23</sup> At the beginning of 2007, the price per kilogram for tortillas in Mexico City practically doubled in a few weeks. The root cause was that after Mexico's accession to NAFTA (North American Free Trade Agreement), many farmers could not compete with the USA's highly subsidised corn. Because corn is one of the staples in Mexico, the country's food dependency on the USA gradually grew. In the USA, demand for corn to produce agroethanol to fuel cars rose, thus leading to a constant increase in the price for corn needed to make tortillas in Mexico, until the poorest inhabitants could hardly afford them anymore. <http://www.tagesspiegel.de/weltspiegel/die-tortillakrise/806060.html>

<sup>24</sup> Donald Mitchell, A Note on Rising Food Prices, Policy Research Working Paper 4682, World Bank, Development Prospects Group, July 2008

<sup>25</sup> "Die Biosprit-Lüge", a film by Inge Altemeier (2009)

<sup>26</sup> Energy Crops for Agrofuels, FIAN-Deutschland: Fact Sheet for GTZ – Agrofuels – Nov. 2007

<sup>27</sup> Catherine Bowyer, Bettina Kretschmer, Anticipated Indirect Land Use Change Associated with Expanded Use of Biofuels and Bioliquids in the EU – An Analysis of the National Renewable Energy Action Plans, IEEP, March 2011

<sup>28</sup> Renewable Energy Directive 2009/28/EC

<sup>29</sup> "BUND-Hintergrund zur Einführung des Agrokraftstoffes „E10“", Bund für Umwelt und Naturschutz (German Association for the Environment and Nature Conservation), Germany, 24.2.2011

<sup>30</sup> "AG Agrotreibstoffe", Folder "Agrotreibstoffe"; publ. Klimabündnis Österreich (Austria's Climate Alliance), 2008



## Conflicts over Land

About 75% of the poorest inhabitants of the world – women, for the most part – and about 50% of people threatened by hunger are fed thanks to the crops of small farms. Access to land, water, seeds and technical support is essential to them. Agrofuel production has a negative impact on small and subsistence farmers, as well as nomadic and indigenous peoples. It causes their displacement, forced relocation and the loss of land. The distribution of food in the region and the economy suffer greatly.

The destruction of precious ecosystems such as rainforests and savannahs mean that indigenous peoples are losing more and more of their ancestral land, which puts both their physical and cultural livelihoods at risk. In countries such as Brazil, India and the Philippines, land reforms and restitutions in the interest of indigenous peoples have been postponed.

Women in all these groups are hit particularly badly. For structural reasons, access to land is more difficult for women, and due to the increasing demand for land to produce agrofuels, women are finding it even harder to access it. Their position is becoming more and more precarious. In addition, because of the roles and duties assigned to them in their respective societies, women are more limited in terms of mobility than men, and so have practically no chance of earning a living other than in the subsistence economy.

### Example: Indonesia

In Indonesia, the rise in palm oil production, which has nearly doubled between 2002 and 2008, has caused competition for land. The Batang Kuma community (Sumatra) has been driven away from its land and the inhabitants' houses have been burned down so that more palm crops could be cultivated. In February 2009, the Indonesian network Sawit Watch, which focuses on palm oil production, reported on 576 conflicts over resources, mostly over land.<sup>31</sup>

### Example: Brazil

The Guarani Kaiowá, who had already been driven out of Mato Grosso do Sul in the Southeast of Brazil long before, had hopes that their ancestral lands would be returned to them in 1973. A new law had been passed that stated that land should be returned to the indigenous tribes in Brazil. At the same time, sugarcane was planted on subsidised land in Mato Grosso to produce agrofuel. The restitution of the indigenous people's lands was forgotten. The Guarani Kaiowá were forced to remain in substandard reservations and continued suffering from hunger.<sup>32</sup>

### Example: Papua New Guinea<sup>33</sup>

This island state to the north of Australia has been the target of large palm oil producing corporations to produce agrofuel. With the support of the World Bank and other international institutions, land which was formerly used to grow food crops has been purchased for oil palm crops. Rainforests have been cut or burned down to create space for these crops. The indigenous populations have been robbed of their livelihoods. Small farmers (exclusively male) have to farm oil palm crops and hand them over to the large corporations for incomes so small that they are practically unable to cater for their basic needs. Women are simply ignored and forgotten. The massive conversion of indigenous land into farmland

<sup>31</sup> Cf. Pichler Melanie, author's notes – PhD research, 2008, unpublished.

<sup>32</sup> FIAN International: Agrofuels in Brasil. Fact-finding Mission (2008).

<sup>33</sup> FIAN Österreich (Food First Information and Action Network – Austria), "Palmölproduktion in Papua Neuguinea schafft Hunger, Hintergrundinformation zur Unterschriften und Postkartenaktion von Weltgebetstag 2009 und FIAN in Österreich", January 2009

for the large corporations means that it is now even more difficult for women to access land, thus reducing their possibilities of producing food for their families and of looking after them. To ensure greater gains, the corporations set up the Mama Lus Frut scheme. Women can collect the oil fruit dropped by the men during the harvest and receive a small amount of money for this task. The corporations have seen their profits grow by 14 % thanks to this scheme. Furthermore, women are often employed to spray the crops with agrochemicals without receiving any information beforehand about the effects of these products on their health. Food prices have gone up due to lower supply, and because women are unable to grow staple crops themselves anymore, they have to spend their little hard-earned money on food. The lack of opportunity for women to earn money is also linked to prostitution. In Papua New Guinea, women have lost their social position as the family food provider because of agrofuel production, and they have been relegated to simple gatherers of dropped oil palm fruit.

**Example: Guatemala<sup>34</sup>**

On 14 March 2011, over 100 farming families were pushed off their land in the Polochic valley in Guatemala for the second time. Once again, they were robbed of their livelihoods. The police destroyed their homes and harvests. Sugarcane and oil palm crops to produce agroethanol and agrodiesel will be grown on their land. These families are now homeless and have to rely on food aid.

The growing demand for agrofuels on world markets is encouraging more sugarcane and oil palm crops to be grown in Guatemala. The competition for land means that the production of food crops has gone down considerably. Wheat production alone has dropped by 80 %.

**Example: Ethiopia<sup>35</sup>**

In mid-2010, for the third time, an Indian company, this time BHO Agro Plc, acquired huge amounts of land in Gambela, Ethiopia. The Ministry of Agriculture allowed the lease of approximately 27,000 hectares (i.e. the equivalent of half the size of the capital city, Addis Ababa) to grow crops for the production of agrofuels. In 2008, the Indian company Karuturi took over 300,000 hectares of land, the equivalent of the size of Luxembourg, to grow wheat for export. At the beginning of 2010, the Ruchi Group also leased 25,000 hectares for the production of agrofuels.

The Ethiopian authorities argue that the purchase of land by foreign corporations will bring significant economic advantages to the country. However, the population criticises the fact that this land is taken from poor farmers, without any prior consultation of the local population and that this represents large losses of resources for the country.

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<sup>34</sup> <http://www.regenwald.org/mailalert/699/guatemala-konzerne-lassen-bauern-fur-biosprit-brutal-vertreiben>

<sup>35</sup> <http://addisvoice.com/2010/08/fears-over-massive-indias-land-grab/>

## *Water Shortage*

Unlike small-scale farming, intensive industrial agriculture is highly water-intensive. For example, about 3,500 litres of precious water is required to produce one litre of sugarcane in Brazil. In China, on average, 2,400 litres of water must be used to produce one litre of ethanol from corn.<sup>36</sup> In addition, agrochemicals used in industrial farming pollute both the surface and the groundwater. The result is a water shortage, which has catastrophic consequences for rural populations, both in terms of access to water and people's health. Women, who perform household duties and care work on a daily basis (by preparing meals, ensuring the family's health, hygiene...) suffer the most from water shortages because the supply problems lead to longer, harder walks to collect water which also leads to health problems. Access to water, one of the most precious foodstuffs, is highly important in the context of the right to food.

## *Damage to the Environment and Biodiversity*

Industrial farming, through the usage of chemical fertilisers and pesticides, causes water pollution and consequently soil erosion and pollution, as well as damage to beneficial insects, soil dwellers and plants. Since the 1960s, there have been drastic losses in terms of biodiversity due to intensive monoculture farming. Agrofuel production also promotes genetic engineering, thus causing problems such as the contamination of other fields, the crossing with wild plants, damage to soil organisms, beneficial insects and birds. Ecosystems' ability to cope is weakened, including their ability to adapt to the effects of climate change. The livelihoods of millions of humans are threatened.

In traditional societies, women are usually responsible for seeds. Their responsibilities include the selection of seeds, their planting and growing. This is also creative work, which enables the expansion of plant diversity. These tasks are threatened by industrial farming, damage to the environment and pollution – thus also having a direct impact on the status and livelihood of women.

## *Climate Change Delusions*

Studies have concluded that agrofuels will not reduce the levels of greenhouse gas emissions. According to a paper published by the Austrian Environmental Bureau in 2007, greenhouse gas emissions of agroethanol depend on the on the raw material it is produced from (rapeseed, wheat, potato, corn, palm oil, sugar), ranging from a 6% increase in emissions to a 30% reduction. For agrodiesel, the estimated reductions ranged between 10 to 70%. In addition to this, one cannot forget the emissions caused by the farming of the necessary raw materials. The elimination of humus and the drainage of peat soils cause CO<sub>2</sub> emissions. Fertilisers release nitrous oxide (N<sub>2</sub>O), which has a greenhouse gas effect about 300 times greater than CO<sub>2</sub>.<sup>37</sup>

The recent IEEP study about changes in land use mentioned above<sup>38</sup> demonstrates that the final CO<sub>2</sub> balance of agrofuels is negative if one takes all steps of their production process into account. These include the deployment of agricultural machinery, agrochemicals (especially fertilisers), transport and the destruction of biodiversity. Moreover, the enormous amounts of CO<sub>2</sub> released due to the destruction of rainforests, especially through slash-and-burn practices, the conversion of other

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<sup>36</sup> International Water Management Institute, Water Policy Brief, Issue 30, Nov 2008

<sup>37</sup> "Nachhaltigkeitskriterien für Agrotreibstoffe". Short study in the context of the project "Essen oder Fahren – Landwirtschaft im Spannungsfeld zwischen Ernährungssicherheit und Biofuels", Ökobüro (Austrian Environmental Bureau), Koordinationsstelle österreichischer Umweltorganisationen (Coordination Office for Austrian Ecological Organisations), December 2007

<sup>38</sup> Catherine Bowyer, Bettina Kretschmer, Anticipated Indirect Land Use Change Associated with Expanded Use of Biofuels and Bioliquids in the EU – An Analysis of the National Renewable Energy Action Plans, IEEP, March 2011

woodlands, grasslands, fallow land and peat soils into farmland must also be taken into account when calculating the CO<sub>2</sub> balance of agrofuels.

After considering the energy consumption, CO<sub>2</sub> emissions, nitrous oxide released by chemical fertilisers (which is even more harmful) throughout the entire agrofuel manufacturing process, the conclusions of the study paint a grim picture. National action plans regarding renewables in the 27 EU Member States and the targeted agrofuel admixture proportions by 2020 actually lead to an increase of greenhouse gas emissions ranging between 81% and 167% in comparison with fossil fuels. What is the result of this trend? Agrofuels do not mitigate climate change – quite the contrary: they actually lead to greater amounts of greenhouse gases being released into the atmosphere.

Another example: a car consuming 8 litres of petrol per 100 km emits 18.6 kg of CO<sub>2</sub> every 100 km. If that car is fuelled by E10 fuel, containing 10% ethanol (which is supposedly produced in a sustainable fashion, if this should be possible) and which in theory releases 35% less CO<sub>2</sub>, than that same car's CO<sub>2</sub> emissions would drop to 18 kg per 100 km. In comparison, a fuel-efficient car that consumes only 4 litres of petrol per 100 km would release only 9.3 kg of CO<sub>2</sub> per 100 km. If the same car consumed sustainable E10, there would be a slight drop to 9 kg per 100 km. A decisive step towards climate change mitigation is actually the reduction in fuel consumption itself, not the usage of agrofuels. Even the consumption of agrofuels supposedly produced in a sustainable manner would not have a significant effect on climate change mitigation.<sup>39</sup>

## Summary

Industrialised countries' agrofuel targets (i.e. the EU, USA) are leading to the forced production of raw materials for agrofuels in the South, with serious human rights violations, especially in terms of the right to food, and with the loss of livelihoods, both in the form of land and natural resources.

In some countries, it is possible that small economic gains are made through the production of agrofuels<sup>40</sup> – especially for men, because it is a new technology and women are not as mobile as men. However, the negative social, ecological and economic consequences are by far greater than the advantages. Once again, in this case, women are hit particularly hard. Women constitute 70% of the world's poor<sup>41</sup> and are affected by landlessness more frequently than men. If they are able to farm a piece of land, then it is usually just on a small scale or for subsistence. They rarely own the land themselves. Women are often the ones who ensure the protection and development of agricultural biodiversity. All this is threatened by the agrofuel boom, which leads to the displacement and relocation of communities in many parts of the world. If women lose the possibility of farming, they have fewer alternatives to make a living than men.

Raw materials for agrofuels in Europe are often produced in the South and in the East, with a series of ensuing problems: it is a new form of colonialism. In the process, the riches of agricultural biodiversity in the South are also threatened by industrial agriculture.

Biodiversity is the basis of global food security. The fast reduction of plant genetic diversity diminishes the possibilities of adapting food plants to new conditions through breeding. However, in these times of climate change, the adaptation of plants is vital for humanity! Genetic engineering cannot do what conventional breeding can. In Europe, while biodiversity will suffer in the mid- to long-term, it is important to bear in mind that in the South, the livelihoods of small-scale farmers are at risk, especially women's, and they depend directly on plant genetic diversity. The production of

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<sup>39</sup> "BUND-Hintergrund zur Einführung des Agrokraftstoffs „E10“: Flächen für Agrospritbau nicht ausweiten. Nur drastische Reduktion des Spritverbrauchs führt zu mehr Klimaschutz im Verkehr", BUND e.V. Freunde der Erde (BUND/Friends of the Earth), Berlin, 24.02.2011

<sup>40</sup> Agrofuels: Opportunity or Danger?, Conference Report, 12. – 14. December 2007, Hotel Christophorus-Haus, Berlin Spandau/BRD

<sup>41</sup> [http://www.unifem.org/gender\\_issues/women\\_poverty\\_economics/](http://www.unifem.org/gender_issues/women_poverty_economics/)

agrofuels has a global effect on the right to food, especially for women. It also is responsible for the increase in food prices. The latter also has an impact on the poor in the EU, not only in the South: poor people in Europe cannot always afford a balanced diet anymore.

Agrofuels are not a sensible solution for energy and climate change problems. There are an increasing number of scientific studies<sup>42</sup> that point to the additional greenhouse gases they cause.

If all 6.7 billion people in the world consumed as many raw materials as Europeans do, then we would need three planets – and the USA is an even worse culprit. Rightly, now, poorer countries are also aiming to reach our standard of living. That is why we cannot simply think of a form of fuel to replace oil – we should think about immediate measures that would lead to a drastic reduction of energy consumption itself. We cannot allow energy production for the rich of this world to be done at the expense of the poor, as is the case with agrofuels!

## Outlook and Recommendations

The political demand for policy coherence in the context of development means that other policy areas must not counteract or undermine the aims of the development interventions. The current EU's agrofuel and energy policies in general, however, undermine policy coherence for development – and this fact has been proven. Thus, measures must be defined that ensure policy coherence for development, human rights, the environment, climate change, agriculture and energy.<sup>43</sup> Solutions must be elaborated in several fields, including in the energy and transport sector, in the context of taxation and redistribution measures as well as directly regarding the Agrofuel directive:

### Alternative Strategies

In order to attain the greenhouse gas emissions targets, strategies must be chosen that are compatible with human rights commitments, such as:

- **Increasing energy efficiency.** Public funding for the energy-saving renovation of old buildings, passive house planning, reduction of packaging, development of technologies to increase energy efficiency.
- **Reducing car traffic.** Expansion of public transport offers and raising its level of attractiveness, moratorium for road building, congestion charges for large towns, levies for traffic-causing factors and road usage, parking space management, etc.
- **Drastic reduction of vehicles' fuel consumption.** Tax incentives for electric cars, promoting the usage of fuel-efficient vehicles, registration tax for fuel-greedy cars (e.g. for the Porsche Cayenne S in Norway: 53.000 €).
- **Avoidance of truck transport.** High transport taxes to reflect real transport costs, incentives for rail transport, expansion of train routes along main transport routes in Europe, promotion of inland water transport (which is even less harmful to the environment than rail transport<sup>44</sup>) and ocean shipping (which consumes even less energy).
- **Higher taxes on kerosene and ship fuel.** The taxes should be at least equivalent to those on petrol and diesel to reflect real costs.

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<sup>42</sup> Jerry M. Melillo, John M. Reilly, David W. Kicklighter, Angelo C. Gurgel, Timothy W. Cronin, Sergey Paltsev, Benjamin S. Felzer, Xiaodong Wang, Andrei P. Sokolov, C. Adam Schlosser, "Indirect Emissions from Biofuels: How Important?", Science DOI: 10.1126/science.1180251, published online, 22. October 2009;

<http://www.sciencemag.org/cgi/content/abstract/1180251>, as with the IEEP study mentioned above.

<sup>43</sup> Sarah Funk, Melanie Pichler, "Agrartreibstoffe im Fokus - Politikkohärenz aus der Perspektive des Rechts auf Nahrung, Dossier entstanden im Rahmen des Projekts „Das Menschenrecht auf Nahrung als Grundlage für Politikkohärenz“, funded by the Österreichische Entwicklungszusammenarbeit (Austrian Development Cooperation Office), Vienna, February 2011

<sup>44</sup> [http://www.donauschifffahrt.info/oeffentlichkeit/vorteile\\_der\\_binnenschifffahrt/](http://www.donauschifffahrt.info/oeffentlichkeit/vorteile_der_binnenschifffahrt/)

- **Change to sustainable renewable energy sources.** Wind and solar energy, including local usage of moderate quantities of regionally-produced agrofuel (e.g. wood chips), except for private motorised transport, prevention of competition for land used for food crops.
- **Organic farming for all farmland.** Taxes on chemical fertilisers to reflect real costs in comparison with organic farming.
- **CO<sub>2</sub> tax for all products,** reflecting their respective carbon footprints.
- **Priority to and preservation of food crop farming.**
- **Change to international trade to respect social rights, women's rights and the environment.**
- **Support to ensure quality of life in rural areas** through rural development measures.
- **No speculation on agricultural produce.** Prevention of international food commodity speculation and regulation of food prices.
- **International cooperation.** Promotion of monitoring measures, accountability, audits of companies and their activities in agricultural production and trade, in order to promote small-scale regional food farming to meet local food demands.
- **Agricultural reform as an instrument to promote food security.** No threats to agricultural reforms due to plant crops for energy production; protection of the right to food, taking into account the specific needs of women.
- **Participation.** Compulsory participation of the concerned local populations in the case of investments in agriculture, rural development and land usage; intensive cooperation with the local populations, granting them equal rights; cooperation especially with women, small-scale farmers and indigenous communities to set up fair land use plans.

### *Recommendations in Terms of Agrofuels*

- **Moratorium for admixture targets.** The EU's admixture targets should be suspended until there is a guarantee that human rights are not being violated due to the production of agrofuels.
- **No import of agrofuels into the EU,** due to competition between land use for crops to produce fuel and food crops.
- **No funding for the industrial production of agrofuel plant crops in the EU.** In order to support social and small-scale farmers' movements, put a stop to the production of agrofuel plant crops unless they are consumed in the regions they are grown in and are not used to fuel motorised transport.

In the EU but also globally we require new mobility, energy, economic, agricultural and food policies. They must all reflect the need for food sovereignty and be socially, ecologically and economically sustainable without making use of genetic engineering.