

## The impact of agrofuels from a right to food perspective

*Today an increasingly important share of so-called bioenergy is produced from agricultural crops traditionally used for food and feed. The cultivation of non-food energy crops requires land and water. This creates direct competition for the resources to feed the world's population in a situation where 854 million people are already suffering from hunger and malnutrition, most of them living in rural areas. The effects of agrofuel<sup>1</sup> production on the enjoyment of the human right to adequate food (RtF) of the most marginalized groups and communities should be considered before implementing policies and programs that promote investment, trade and use of agrofuels. The State Parties to the International Covenant on Economic, Social and Cultural Rights (ICESCR) and the Community of States have legally binding obligations to the realization of the RtF. They must guarantee to poor rural communities secure access to and control over natural resources for food production. Moreover, states must enforce policies that foster adequate food supply at local and national levels and must guarantee that food is economically accessible for all persons. States have to regulate the economy and the markets according to these obligations and should not create incentives that endanger the realization of the RtF and other human rights. The enforceability of the RtF vis-à-vis the interests of powerful economic actors (agribusiness, oil TNC and car manufacturing companies), who are investing in agrofuel production, is a major challenge to be tackled. If not properly addressed, already existing problems related to increasingly concentrated agro-food systems all over the world (land concentration, worsening labor conditions and soil depletion) might be further exacerbated by the agrofuel boom.*

### Agrofuels: An Emerging Giant?

Bioenergy is produced from renewable biomass such as wood, organic waste, energy crops and agricultural residues, and currently accounts for 11% of the world's energy consumption.<sup>2</sup> The main source is wood that is used for traditional cooking and heating. Over the last few decades, modern bioenergy technologies have been developed and their use has been extended to transport, electricity production and decentralized heat supply.

The recent energy crop boom is largely due to the increasing popularity of liquid agrofuels for the transportation sector, namely agro-ethanol (based on plant sugars and starches) and agro-diesel (based on plant oils). Today agrofuels make up 2% of the global fuel consumption and this figure is rising fast as many governments are setting ambitious targets to decrease their dependence on fossil fuels and are looking for environmental gains through a reduction in greenhouse gas emissions. These targets are accompanied by generous subsidies for farmers and industries in OECD countries, increasing recently to USD 15 billion.<sup>3</sup> The world's arable land, used to grow biomass for

agrofuels, is expected to grow 280% by 2030 if agrofuels are based solely on conventional crops.<sup>4</sup>

As the domestic production of agrofuels is insufficient to meet the targets set by the EU and the US, it is clear that a large part must be imported. Due to better climate conditions and cheaper resources and labor, the rural areas in the Global South will play a major role in agrofuel production and will be most dramatically influenced by it. Even now, many Latin-American countries are dramatically increasing their energy-crop areas (mainly sugarcane, soy and palm oil), while Malaysia and Indonesia are the leading exporting countries due to the aggressive expansion of palm oil plantations.

Some African countries like Nigeria, Uganda, Cameroon and Ghana are increasing their palm oil production, while Southern and Eastern African countries are betting on jatropha, a non-edible plant rich in oil, which competes less with food crops as it can grow in arid conditions and poor soils. Proponents argue that so-called "second generation agrofuels" (ethanol derived from cellulose in woody and fibrous materials, a process not commercially available yet), could decrease the competition with food production. However, it is not yet clear whether second generation agrofuels based mostly on genetically modified crops will really deliver on their promises. On the other hand, competition for land and water to cultivate would still remain. The recent impacts on soil and water of expanding pine and eucalyptus mono-cultures for the paper pulp industry and the development of genetically modified trees are an early warning sign that industrial-scale wood production systems have considerable negative social and environmental impacts.

### Whose Right To Food Is At Stake?

Increasing the use of renewable biomass, particularly for locally controlled energy production and utilization, is likely to contribute to rural development and control global warming. Nonetheless, governments and the private sector favor investing in and supporting the substitution of fossil fuels with agrofuels regardless of the fact that it is the most inefficient way to use biomass from an environmental and social point of view.

While energy crops might have a positive impact on some farmers and rural populations able to join the agrofuel boom, they pose enormous threats to the enjoyment of the right to adequate food of the most marginalized populations, which have already become highly vulnerable.

The findings of the United Nations' Hunger Task Force Report show that more than 75% of the world's poorest people live in rural areas and depend either partly or mainly on agriculture and natural resources for their livelihoods. Half of the world's hungry people are smallholder farmers who live on poor quality land without adequate access to productive resources. 22% of them are landless, surviving mainly on an income from precarious rural labor. Additionally, 8% form part of the fishing, hunting and herding communities, who depend directly on their natural environment for their livelihoods. Secure access to and control over productive resources like land, water and agricultural

inputs such as seeds and livestock are therefore key to improving the situation of these communities. The development of industrial agricultural or livestock production systems and commercial fisheries as the main driving force of food and agricultural policies in the North and South foster farming practices that often disregard and even destroy the access of smallholder farmers, pastoralists and fisher-folk to the productive resources they need to live in dignity. The remaining 20% are part of the poor urban sectors and they depend on the purchase of food. For them, any rise in the price of food worsens their already vulnerable condition.

According to the FAO Voluntary Guidelines for the Implementation to the Right to Food,<sup>5</sup> which 191 states committed to in 2004, states have to make an additional and specific effort for the realization of the right to food for these groups.

### The Right to Adequate Food: A Conceptual Framework

According to General Comment 12 of the UN Committee on Economic, Social and Cultural Rights, the right to adequate food is realized “when every man, woman and child, alone or in community with others, has permanent physical and economic access at all times to adequate food or means for its procurement.” The Committee has identified the following as core elements of the RtF:

1. Availability of food directly from productive land or other natural resources:	3. Economic accessibility: the affordability of any acquisition pattern or entitlement to procure food, without threatening other basic needs. Economic accessibility is applied to any patron of food provision.
2. Availability of food through well-functioning distribution, processing and market systems - bringing production and demand into balance	4. Physical accessibility: secure access for physically vulnerable persons, disaster victims and people relying on a specific territory for their livelihoods: - food aid in crisis situations, - indigenous peoples, pastoralists, etc.
5. Sustainability of food availability and access (long-term ability to feed oneself): - Sustainable use of natural resources for food production - Economic sustainability: income and prices of food	
6. Adequacy: quantity but also quality of food in accordance with human physiological needs at all stages throughout the life cycle. The food should be culturally acceptable, and with clean water and energy available for food preparation	
7. General human rights principles: universality, indivisibility, interdependence, priority attention given to vulnerable groups, equality and non-discrimination, participation and inclusion, transparency, accountability.	

The RtF, like any other human right, imposes three types of obligations onto State Parties at the national level: the obligations to respect, to protect and to fulfill. The obligation to respect existing access to adequate food requires State Parties not to take any measures that result in preventing

such access. The obligation to protect requires measures by the state to ensure that enterprises or individuals do not deprive individuals or communities of access to adequate food. The obligation to fulfill means the state must pro-actively engage in activities intended to strengthen people's access to - and utilization of - resources and means to ensure their livelihoods, including food security. State Parties also have extraterritorial obligations under which they are required to respect and protect the enjoyment of the RtF in other countries and to facilitate access to food and to provide aid when necessary.

Given the increasing influence of transnational corporations and other business enterprises on the economies of most countries and in international economic relations, the UN human rights system has started to discuss their responsibilities with regard to human rights. The Norms on the responsibilities of transnational corporations and other business enterprises adopted by the UN Sub-Commission on the Promotion and Protection of Human Rights stated that states have the primary responsibility to guarantee human rights recognized in international as well as national law, including ensuring that transnational corporations and other business enterprises respect human rights. However, within their respective spheres of activity and influence, transnational corporations and other business enterprises have the obligation to promote, secure the fulfillment of, respect, ensure respect of and protect human rights recognized in international as well as national law, including the rights and interests of indigenous peoples and other vulnerable groups. Explicitly the Norms establish that transnational corporations and other business enterprises shall respect economic, social and cultural rights as well as civil and political rights and contribute to their realization, in particular the right to food and water, and shall refrain from actions that obstruct or impede the realization of those rights.

### The Impacts of Agrofuels on Aspects of the Right to Food of Vulnerable Groups

The impacts of agrofuels on the right to food of vulnerable groups can be assessed according to the core elements and obligations described in the conceptual framework. The major impacts observed so far can be summarized as follows:

1. *Loss of food autonomy*: The first dimension of availability relates to the *capacity of people to feed themselves by having secure control over land, water* and other resources for food production.

Forced evictions and lack of access to land and productive resources already constitute major patterns of violations of the right to food worldwide.<sup>6</sup> Increased pressure on land and water triggered by an aggressive expansion of energy crop monocultures is very likely to lead to further dispossession of natural resources controlled by marginalized rural groups, such as peasants, indigenous communities, people of African origin and fisherfolk.

Palm oil plantations, for example, promote deforestation and pollution of water in regions where indigenous peoples' diets depend on forests and territories, like in the case of Indonesia.<sup>7</sup>

Due to forced evictions and the violent expropriation of natural resources, countries like Colombia already have 3 million internally displaced people. Massive and forced evictions of rural communities force these families to live in cities with precarious or even inhuman living conditions.<sup>8</sup> Although industrial monoculture production for exports is not the only reason for this migration, it is an important factor.

Another way farmers lose control over land is through contract farming for agrofuel companies, such as the 30-year outgrower contracts currently being promoted in Southern Africa for jatropha trees.<sup>9</sup> Farmers are lent the money to buy seed and chemicals, while additional fees for membership, administration, management, extension and licensing services are levied upon them. The farmers are expected to pay for all of these, as well as replacing any trees that die at their own cost, while the contracting company determines both the price of the seeds and services, as well as the price at which they buy back the product. As outgrowers are not permitted to sell to any other company, farmers may still own the land on paper, but during the period of their contracts, they lose control over it because the trees really belong to the company.

Renewed interest in land by economically powerful actors is likely to make the implementation of redistributive agrarian reform policies, which are needed to fulfill states' obligations in relation to the RtF, even more difficult than it already is. The remarkable deceleration of the Brazilian agrarian reform program in 2007 is a clear example of this.

Highly unequal distribution patterns are an unsolved problem in Latin America, Southern Africa and South-East Asia. The agrofuel boom may worsen this situation due to increasing land prices. Moreover, agrarian reform policies based on the principle of expropriation of unproductive lands for redistribution may become inefficient in a context in which "unproductive" lands are disappearing because of the agrofuel sector's increased control over these lands.<sup>10</sup>

To sum up, agrofuel development is likely to favor a deeper concentration of food systems worldwide with an increase in corporate control over food chains and natural resources, thus threatening the survival of small-scale food producers, family farming systems and traditional/indigenous knowledge and food systems. Agrofuel promotion schemes are designed to favor big companies -since they control an important part of the world's agricultural production- with their monoculture plantations, economies of scale, small job creation, and export oriented strategies to supply international markets. It is not by chance that transnational companies such as Cargill, ADM and Bunge among others, are investing heavily in the agrofuel sector.<sup>11</sup>

## 2. The second dimension of availability relates to *market food supplies at the local, national and international level.*

States are obliged to take legislative measures and implement policies and programs that effectively foster food security at all of these levels. The unregulated expansion of energy monocultures endangers local, national and international food supplies and may amount to a violation of the right to food of the affected population.

The run for energy crops might imperil *local food supply*, by creating a lack of locally produced food in communities and a higher dependency on food distributed through the market or through subsidised food supplies, leaving communities more vulnerable to crises and shocks. Betting on energy crops is a risky business for them: cases in Brazil show that food insecurity among smallholders cultivating energy crops (sugar cane) is not unusual. All of their labor capacity is absorbed by the arduous cash crop. They rely on their sole harvest earnings to eat the whole year round, making them very vulnerable.<sup>12</sup>

At the *national level*, agricultural markets are in danger of becoming weighted in favor of the export of agricultural energy crop commodities, leaving countries at the mercy of the prices for the import of basic food products because they are not self-reliant anymore. Kenya is forecasting an increase in energy crops, while facing increased food imports due to lower staple crop harvests. Even in Brazil, which is not a country scarce of land, sugar cane (with 6 million ha occupying 9% of the agricultural land) has recently started usurping former grazing land, corn and wheat plots in several states - although grain production overall remains stable. The increasing vulnerability of countries depending on increasingly expensive food imports is evident from the FAO announcement on historically low grain stocks worldwide in 2007, projected to diminish by a further 10% in one year.<sup>13</sup> Markets become very vulnerable to scarcity and speculation under such circumstances. In times of scarcity commodities tend to flow towards those with the highest purchasing power, namely the urban and elite markets.

The ethanol boom in the US is sending further shockwaves through the *international markets*. Next year, 30 million more tonnes of maize are expected to be used for ethanol than for exports. The industrial use will amount to 84 million tonnes, close to the volume of world trade in maize. Ethanol production is expected to double by 2016.<sup>14</sup> The US is exporting more than two thirds of internationally traded grains and its influence on global prices and availability is huge.

## 3. *The economic accessibility of food:* Food prices and income levels for households spending a large share of their income on food are the main factors in determining the *economic accessibility of food.*

States are obliged to secure economic access to food for the entire national population through different strategies and measures ranging from the promotion of adequate labor conditions and salaries, to food

subsidies, price control, social security schemes and others.

The recent diversion of food crops for agrofuel production has played an important role in the recent price increase in some agricultural products like maize, rice and vegetable oils. Poor people spend a large share of their household budget on food (up to 50-70%). A food price increase of 1% is expected to create food insecurity for 16 million people. This explains the recent surge in food riots. On the one hand, cheap exports from the US and the EU have been decreasing for some products related to agrofuel production. For example, in Mexico, poor urban consumers depending on tortilla calories for more than half of their diet recently experienced a 400% price increase due to maize import scarcity and speculation. On the other hand, scarcity of domestic production caused by competition from energy crops has started to have an effect: in Brazil, the expansion of sugarcane on grazing grounds has increased the price of milk by 50%; in Indonesia, the government is not able to counter the scarcity and price rises of qualitative cooking oils on the domestic market, due to rocketing world market palm oil prices for agrofuels.<sup>15</sup> Cassava, a potential starch supplier for the agrofuel industry, is also a staple in many poor tropical countries. According to the IFPRI, its price is expected to increase by 33 percent by 2010 and 135 percent by 2020.

According to the International Food Policies Research Institute (IFPRI) increases in the price of basic grains as a result of agrofuel expansion, will go hand in hand with cuts in the availability of and access to food worldwide. Sub-Saharan Africa will especially be affected, with an expected fall of 8% in the availability of food.<sup>16</sup>

A rise in food prices does not have the same impact on all countries and all social sectors. Some rural producers are expecting to benefit from the high prices of agricultural products and therefore experience improved living conditions in rural areas. In fact, during the last few decades, small producers have demanded better prices for their products. The FAO estimates that a decrease in agricultural exports from Northern to Southern countries will bring about a reduction in dumping. Nevertheless, highly concentrated agrifood systems controlled by corporate interests, do not secure benefits from higher prices for small producers, since these benefits are often monopolized by those who control commercialization processes.

On the other hand, there are supporters of the idea that agrofuels will create sources of rural employment, better income opportunities and living conditions for rural poor populations. For rural workers, reduced labor opportunities due to mechanized monoculture plantations and low wages put the access to food for themselves and their families at risk. In Brazil, the proportion of rural labor in the sugar cane sector has decreased over the last year, and the number of temporary low-paid contracts has increased.<sup>17</sup>

On a macro-economic scale, higher world prices from 2006<sup>18</sup> have already led to structural cuts in imports in some wheat and maize importing countries like Nigeria. According to the FAO, the total food import

bill of the 82 poorest food dependent countries increased by 35 and then 14 percent in the two years previous to the 2008 harvest season. African countries have even experienced a doubling over the last five years. These negative effects show the high vulnerability of food security strategies based on food imports and aid. Countries that have failed to support their smallholders' food production and have concentrated instead on export production are now likely to suffer most from price fluctuations caused by the agrofuel boom.

4. *Food aid in danger:* When an individual or a group cannot enjoy the RtF, due to reasons beyond their control, states have the obligation to ensure this right. *Physical accessibility to food* is important when food aid becomes necessary in contexts of emergency and natural disasters.

Recently, UN World Food Program (WFP) officials declared agrofuels to be one of the main causes for the increasing difficulty to deliver food aid, whether purchased locally or from the food surpluses of exporting countries. Both possibilities are becoming scarcer. Furthermore, they announced that higher food prices strongly reduce their capacities. The WFP estimates that, due to increasing food prices, it will require an additional 500 million dollars on top of its 2,900 million budget, to finance the necessary projects for 2008, excluding possible emergency situations. Zimbabwe, Eritrea, Haiti, Djibouti, Gambia, Tajikistan, Togo, Chad, Benin, Myanmar, Cameroon, Niger, Senegal, Yemen and Cuba are the countries most likely to be affected by food price increases.

5. *A rise in natural resource exploitation:* According to the Voluntary Guidelines for the Implementation of the Right to Food, states must implement national support policies, legal tools and mechanisms to protect the ecological sustainability and carrying capacity of ecosystems, to secure the sustainable production of food for present and future generations, prevent water contamination, protect soil fertility and promote sustainable fishing and logging practices.

The conversion of land or forest areas to energy crop monocultures has implications for climate change and sustainable use of natural resources. Deforestation caused by monocultures such as oil palm and soy has had disastrous effects on the climate in countries with tropical forests like Indonesia, Malaysia, Colombia and Brazil. Monocultures often lead to the contamination of the soil, rivers, subterranean and spring waters due to the intensive use of chemical products, especially under some no-tillage systems. Monocultures also require a lot of water, as water resources are agro-ecologically not optimally used and often access to irrigation is concentrated in the hands of a few powerful groups: one litre of sugar cane ethanol requires at least twelve litres of water. In some cases, land conversion to energy crops contributes to greenhouse gas emissions, for example, when forest or peat areas are burned or drained. Furthermore, the production process itself can produce emissions through petrol used for heavy machinery and the

production of chemical fertilizers. Specific farming practices also relate to emissions: excessive fertilizer use causes huge N<sub>2</sub>O emissions, a strong greenhouse gas, and the burning of sugar cane leaves on the field accounts for 4.5 tons of CO<sub>2</sub> per hectare.<sup>19</sup>

Another serious problem related to agrofuel sustainability is the use of genetically modified organisms on traditional staple crops such as maize, but also with the purpose of making a second generation of agrofuels possible. This is the case for transgenic trees with pollen that can travel kilometres, presenting a high risk of uncontrolled contamination of native species.<sup>20</sup>

#### 6. *Impact of agrofuels on other human rights:*

According to the general human rights principles of universality, indivisibility and interdependence, it is important to note that the impact of agrofuels is not exclusively restricted to the RtF, but also affects other rights such as the right to adequate housing, to water, to health and to indigenous and labor rights. Serious violations of workers' rights have been reported in several countries related to sugar cane and oil palm plantations, ranging from over-exploitation, prohibition of trade unions and forced labor. The International Associations of Food, Agriculture, Hotels, Restaurants and Tobacco Workers Union (IUF) reported that Indonesian workers employed on palm plantations have been threatened and criminalized for protesting against violations of their labor rights.<sup>21</sup> In Brazil slave labor is the dark side of the expansion of the agricultural and livestock sectors, and is present in big exporting agriculture companies (soy, sugar cane and cotton) as well as on modern livestock farms for export.<sup>22</sup> The majority of slave workers are migrants, men, illiterate, unemployed, unqualified, landless, or with land but with no resources to work on it; they come from the poorest states of Brazil (Maranhao, Piaui, Tocantis) and, since they are confronted with a lack of jobs and land, they agree to jobs where over-exploitation and/or slave labor conditions are normal.<sup>23</sup> According to the National Plan for the Eradication of Slave Work of Brazil, there are 25 thousand workers working under conditions of slavery. Landlords and business groups are primarily responsible for crimes involving slave labor. A study by the ILO found that there is a resurgence of forced labor imposed by private agents in the agricultural sector and this is just one of the patterns of forced labor worldwide.<sup>24</sup>

The impact of agrofuel production on other human rights has not been fully documented or studied. Similarly, there are no studies that include a gender perspective on the impact of agrofuels on human rights.

#### 7. *Final considerations*

Agrofuels will not solve the problem of hunger in the world. On the contrary, they threaten to make a situation that is already very critical even worse. States and the international community have committed themselves and given high-priority to reaching the Millennium Development Goals<sup>25</sup> including goal number one, to half the number of people

suffering from hunger worldwide. To achieve these goals, the states and the international community have to dedicate the maximum of their available resources to policies and programs that fight hunger, such as those programs stipulated by the ICESCR, before embarking upon a policy of the promotion of agrofuels. Within these policies the proposal of food sovereignty is emphasized. The promotion of food production by small-scale producers for the local and national consumption has to be made a priority. Furthermore, the policies of agrarian reform should be guaranteed for rural marginalized groups along with access to and control over land and other productive resources. Also a priority are policies of agro-ecological production which assure a sustainable use of the natural resources for the food production and which revalue the traditional and indigenous knowledge of production and nutritional culture. Policies and programs that encourage the use of biomass in a decentralizing way and for local production of energy could be compatible with human rights and the vision of food sovereignty.

The energy problems of our societies cannot be solved without the total fulfillment of human rights. Considering the obligations imposed on the states and the Community of States through the RtF and other human rights, those states that wish to promote policies of agrofuels will have to put into practice a principle of precaution, by means of a pre-award survey that assesses agrofuel policies' impacts at local, national and international levels. Special attention will have to be given to the following aspects:

At the national level:

- Governments who intend to develop or who develop the agrofuel sector are not allowed, under any circumstances, to destroy the access to food or resources for food production of the rural communities. States have to efficiently regulate the private sector and protect rural citizens from forced labor, forced evictions and other destructive actions by third parties (like national and foreign companies or international institutions).
- States will have to regulate the pressures of the promotion of agrofuels on land and have to guarantee that there will not be a refocus on land possession and that agrarian reform programs, where they are necessary, will not be affected by these policies.
- States will have to assure that agrofuels do not endanger the availability of foods at all levels.
- States will have to control the effect of agrofuel policies on the price of food and to safeguard economic access to food for the population through different strategies and measures, which can include support for deigned working conditions and remuneration adapted to the workers, subsidies on foods, control of prices, schemes of social security and policies of basic income among others.
- States will have to guarantee total respect for all of the labor rights of the agrofuel-sector workers.
- States will have to guarantee the effective participation of rural groups and their organizations/movements in the decision making

process of promotion policies for agrofuels, in their application and in the processes of monitoring them.

At the international level:

- States, especially the OECD Member States, will have to ensure that policies promoting the use of agrofuels do not contribute to violations of the RtF in other countries. In particular, they will have to ensure that their policies of subsidy and incentives for agrofuels do not contribute to forced evictions or do not increase conflicts over land and water in other countries.
- States will have to monitor the behaviour of their transnational companies and other companies and will have to impose regulations to protect populations in other countries against forced evictions and forced labor committed by companies.
- The international community will have to take the necessary measures to avoid the international crisis regarding food prices, for example, by increasing the reserves of food and by exploring the creation of mechanisms that are considered necessary.

## Notes

<sup>1</sup> In this document we prefer to use the term “agrofuels” instead of “biofuels”, since it refers to the agricultural origin of this type of biomass, without suggesting that the production is made using agroecological cultural methods. In general, monoculture production for energy usage follows agroindustrial patterns that heavily rely on pesticide and chemical fertilizer use.

<sup>2</sup> Global Bioenergy Partnership (2007) “Bioenergy: facts and figures”, <http://www.globalbioenergy.org>.

<sup>3</sup> Global Subsidies Initiative (2007) “Biofuels - At What Cost? Government support for ethanol and biodiesel in selected OECD countries”, [www.globalsubsidies.org](http://www.globalsubsidies.org).

<sup>4</sup> World Business Council for Sustainable Development (2007) “Biofuels, issue brief”, [www.wbcsd.org](http://www.wbcsd.org).

<sup>5</sup> <http://www.fao.org/docrep/meeting/009/y9825e/y9825e00.htm>

<sup>6</sup> Refer to FIAN/La Vía Campesina. 2004, 2005, 2006. Annual report on violations to peasant’s rights.

<sup>7</sup> Friends of the Herat (2008) “Losing ground: The human rights impact of oil palm plantations expansion in Indonesia” [www.foe.co.uk/resource/reports/losingground.pdf](http://www.foe.co.uk/resource/reports/losingground.pdf).

<sup>8</sup> Mingorance, Fidel / Minella, Flaminia / Le Du, Hélène. 2004. El cultivo de la palma africana en el Chocó. Human Rights Everywhere, Diócesis de Quibdó.

<sup>9</sup> See Africa Biodiversity Network (2007) “Agrofuels in Africa”, [www.giaifoundation.org/documents/ABN%20Agrofuels%20Africa.pdf](http://www.giaifoundation.org/documents/ABN%20Agrofuels%20Africa.pdf).

<sup>10</sup> FEDERATION OF INDONESIAN PEASANT UNION (FSPI) 2006. Agrarian Conflict and Violence Toward Peasants in Indonesia. Case study presented at the occasion of the International Conference on Agrarian Reform and Rural Development (ICARRD).

<sup>11</sup> GRAIN (2007), “Corporate power: agrofuels and agroindustries expansion, in *Biodiversidad*, Nr. 54, October 2007.

<sup>12</sup> O Estado de Sao Paulo, 4 de julho 2007. Cana toma espaço de alimentos. Conab admite que milho, soja e trigo vêm perdendo áreas em MT, MG, SP e no PR, *Fabíola Gomes*.

<sup>13</sup> FAO (2006) “Food Outlook Nº 2. Global Market Analysis”, Rome.

<sup>14</sup> FAO/OECD (2007) “Agricultural Outlook 2007-2016”.

<sup>15</sup> Down to Earth. „Biofuel fever“. Nº 74 August 2007.

<sup>16</sup> IFPRI. 2007. The World Food Situation. New Driving Forces and Required Actions. Washington.

<sup>17</sup> CEPAL (2007) «Biocombustibles y su impacto potencial en la estructura agraria, precios y empleo en América Latina».

<sup>18</sup> Comisión Pastoral de la Tierra / Rede Social de Justicia y Derechos Humanos. 2007. Agroenergía. Mitos e Impactos en América Latina.

<sup>19</sup> For the environmental impacts of agrofuels please refer to the German Advisory Council on the

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Environment (SRU) (2007), *Climate Change Mitigation by Biomass*, Berlin.

<sup>20</sup> See <http://environment.guardian.co.uk/energy/story/0,,2030144,00.html>.

<sup>21</sup> See: [http://www.iuf.org/cgibin/dbman/db.cgi?db=default&ww=1&uid=default&ID=3003&view\\_records=1&en=1](http://www.iuf.org/cgibin/dbman/db.cgi?db=default&ww=1&uid=default&ID=3003&view_records=1&en=1).

<sup>22</sup> See: José Graziano da Silva, “Biocombustíveis para os pobres”, 31 de agosto de 2007.

<sup>23</sup> For more information about the characteristics of slave labor, see Sydow, *Avanize* (2003). *O Perfil do Trabalhador Escravo no Brasil*, en: *Rede Social. 2003. Direitos Humanos no Brasil. 2003. Relatório da Rede Social de Justiça e Direitos Humanos em colaboração com Global Exchange*. São Paulo, p. 109-114.

<sup>24</sup> ILO. 2005. A Global Alliance Against Forced Labour. Global Report under the Follow-up to the ILO Declaration on Fundamental Principles and Rights at Work 2005. Report of the Director-General to the International Labour Conference, 93rd Session 2005, Geneva.

<sup>25</sup> The first report by the hunger task force of the Millennium Project developed a typology of the hungry worldwide. This first report was published in New York, April 2003. See also the excellent overview presented by the International Fund for Agricultural Development (IFAD) in 2001: *Rural Poverty Report 2001. The Challenge of Ending Rural Poverty*, Rome. See: [http://millenniumindicators.un.org/unsd/mi/mi\\_goals.asp](http://millenniumindicators.un.org/unsd/mi/mi_goals.asp).