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Bioenergy in the EU: Contradictions Driving Excess and Unequal Land Use for Industrial Biomass Production

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Abstract

Looking at the development of renewable energy policies in the EU, a number of assumptions are repeated throughout the various policy papers, resolutions and directives, namely that the production and use of renewable energy will contribute to: reduced dependency of imported fossil fuels and increased self-sufficiency; regional development and employment in rural areas; and reduced emissions of greenhouse gases. It is also mentioned frequently as a reason for the increased use of renewable energy that this is generally favoured by the public.

In relation to particularly bioenergy, it has all along been intended to play a prominent role in the transition to renewable energy. However, it was always implied that the biomass should be produced from the EU's own resources. Taking these assumptions into account, it becomes apparent that they are undermined by recent years' development – with constantly increased use of bioenergy and an increasing share of the bioenergy being imported. For instance, although one of the main objectives of the renewable energy policy was – and still is – to reduce emissions of greenhouse gases, it did not urge EU decision-makers to change direction when it became obvious that bioenergy did not meet the requirement to reduce emissions when used on a large scale.

The EU has been leading the use of bioenergy, and this is largely considered by the public to be steps moving us in the right direction. EU and individual member states' policies are ignoring the documented damages and continuously subsidise the use of bioenergy although this is in direct conflict with the EU (and global) policies on biodiversity, climate and development. It is therefore of utmost importance that the social movements jointly speak out against the large-scale use of bioenergy and explain to the public that bioenergy cannot not be produced “sustainably” when the very scale is unsustainable. Public support was from the beginning a prerequisite for establishing common policies for increased use of renewable energy. Public education is therefore our best hope in order to stop the exploitation of land for bioenergy.

Context

This paper is focused on how EU policies are driving land use for bioenergy. I have looked for documentation and traces in different EU documents – communications, resolutions and legislation. I was (maybe naively) looking for – and expecting to find – evidence that the renewable energy legislation was in contradiction with the development aid policies and priorities, but ended up realising that part of the development policies is actually adding to the problem and is in itself a driver or facilitator for exploitation of land. It appears that the problem is not only that different policies for different areas are in contradiction with each other, but also that the different policies are in contradiction with themselves.

Please read this text in the context that it does not aim to reject the idea of setting target for renewable energy as such. But when they are achieved mainly through the use of bioenergy, they are dangerous. And, unfortunately, this is not acknowledged by the renewable energy movement, who is continuously pushing for 100 % renewable energy without taking bioenergy out of this equation. One of the adverse outcomes of this movement's divestment activities regarding fossil fuels is that many pension funds are now investing in bioenergy instead of fossil fuels. The social movement should be much more alert when we are met with calls for a 100 % renewable energy as long as bioenergy is not excluded.

1 Background

The History of Renewable Energy – the Good Intentions that got lost

It is a recurring theme in the story of renewable energy in Europe that the public has been seduced to think it was all about solar and wind. But nevertheless bioenergy has come to play the most prominent role. Thinking on the problems the use of different types of bioenergy have already given – problems that we fear will only deepen in the future – there is reason to look at how and why renewable energy was introduced as part of the EU policies in the first place, and which role bioenergy had in the plans: In the 1970s, the 'oil-crisis' had triggered policies for alternative energy sources in order to reduce dependency on imported oil; in the 1980s concerns over acid rain and greenhouse gases further emphasized the need to go away from fossil fuels, and in the 1990s the main objective was "*To reduce carbon dioxide emissions in the Community by promoting the development of renewable energy sources*" (in order to meet a target set by the Council in 1990 of stabilizing carbon dioxide emissions in the year 2000 at their 1990 levels).

Renewable energies were explained as "non-depletable forms of energy, including, in particular, hydropower wind and solar energy (both thermal and photovoltaic), biomass and geothermal energy. Municipal and other organic waste although depletable, is normally also classified as renewable sources of energy."

Some themes are repeated in the various policy papers, resolutions and directives¹ related to the use of renewable energy, namely that:

- renewable energy sources can and increasing self-sufficiency and help reduce dependency on imported fossil fuels
- renewable energy sources have a positive impact on regional development and employment
- renewable energy helps to improve the overall competitiveness of European companies
- renewable energy sources contribute to achieving the overall strategy for sustainable development
- renewable energy helps to reduce the emissions of greenhouse gases

In the documents, it also appears that bioenergy has through all the years been intended to play a prominent role in the transition to renewable energy – although not articulated. Until the end of the 1990s, it was taken for granted that the biomass energy should be produced from the Community's own resources.

¹ E.g. Communication from the Commission. ENERGY FOR THE FUTURE: RENEWABLE SOURCES OF ENERGY. Green Paper for a Community Strategy. Brussels, 20. 11. 1996 COM(96) 576 final http://aei.pitt.edu/1280/1/renewable_energy_gp_COM_96_576.pdf

It is highlighted that renewable energy is favoured by the general public – and this may explain why European politicians seem to use a lot of effort to mislead the public regarding the benefits of bioenergy. One wonders what will happen when the larger public realise this betrayal.

Looking at the current use of the different forms of bioenergy in the context of these themes, they do not release the promises at all. The current targets for the use of bio-energy cannot be met solely with the EU's own resources², which is also recognized by the EU institutions. In a situation with free trade on a global market, Europe's primary producers of forestry and agricultural products are not always able to compete. Therefore, neither the original intention of increased energy independence nor the intention of creating more income opportunities in rural areas are fulfilled. The promises of sustainable development and reduced emissions of greenhouse gases have not been met either – on the contrary, both sustainability and climate suffers from the use of bioenergy as Part 2 of the paper shows.

Only the big businesses related to the production of bioenergy, such as biotech companies or manufacturing industries producing boilers for biomass etc., and energy companies still have the benefits of bioenergy. This is probably the main reason why bioenergy has been allowed to play a dominant role over the years. Especially the devastating decisions to set binding target, which can only be fulfilled with bioenergy, have been (and is still) pushed forward by the businesses – sometimes accompanied by university researchers and some NGOs.

It is reflected in the different EU documents how both the agricultural and forestry sectors as well as various related industries have pushed to set binding targets for the use of bioenergy. For instance, it was seen as a problem that different member states had different targets and schemes to support the increased use of renewable energy, and the Commission emphasized³ that the predictability was “*insufficient for the renewable energy industry*” with specific reference to a round-table with different market actors⁴ where the main message was that “*a long-term stable framework for the development of renewable sources of energy, covering the political legislative, administrative, economic and marketing aspects of renewables is in fact the top priority for the economic operators involved in development of renewables*”. It is also emphasized that the development and use of renewable energy sources will bring the EU in a good business position for marketing the technologies on a global scale.

This business need for ‘predictability’ led the EU to introduce legislation requiring the Member States to decide on indicative targets for the use of renewable energy by 2010 – including a specific share of electricity to be produced from renewables as well as a specific indicative targets for the use of biofuels and other renewable fuels for transport^{5 6}. When it turned out that the indicative targets were not enough to satisfy the need for predictability so much wanted by the business sector, stronger EU legislation was set in place in 2009: The Directive for Renewable Energy⁷ specifically calling for binding targets both in the transport, heating and electricity sectors – targets which cannot be met without using large quantities of bioenergy. This was the outcome from a Commission communication

² Bioenergy Statistics, Renewable Energy Figures: an Overview, <http://www.aebiom.org/about-bioenergy/statistics/>

³ Communication from the Commission. ENERGY FOR THE FUTURE: RENEWABLE SOURCES OF ENERGY. Green Paper for a Community Strategy. Brussels, 20. 11. 1996 COM(96) 576 final http://aei.pitt.edu/1280/1/renewable_energy_gp_COM_96_576.pdf

⁴ A Milan Conference "Renewable Energy Sources in the Internal European Market" on 17-19 June 1996,

⁵ The European Communities, DIRECTIVE 2001/77/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 27 September 2001 on the promotion of electricity produced from renewable energy sources in the internal electricity market <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32001L0077&from=EN>

⁶ The European Communities: DIRECTIVE 2003/30/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 8 May 2003 on the promotion of the use of biofuels or other renewable fuels for transport <http://eur-lex.europa.eu/legal-content/en/ALL/?uri=CELEX:32003L0030>

⁷ DIRECTIVE 2009/28/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC, <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32009L0028&from=EN>

in 2007 entitled ‘Renewable Energy Roadmap — Renewable energies in the 21st century: building a more sustainable future’ in which the Commission called for mandatory targets to “*provide the business community with the long-term stability it needs to make rational, sustainable investments in the renewable energy sector which are capable of reducing dependence on imported fossil fuels*”⁸.

The shady reality of the relation between the decision-makers and the business sector is that first the lobbyists negotiate (often behind closed doors) and get the decision-makers’ support for what the business calls ‘necessary framework conditions’ (e.g. in relation to bioenergy: legislation for binding targets, tax exemptions etc.) – and then, when decision-makers discover that the legislation was a mistake and want to undo it, the business people will start howling that they have made investments on the basis that they could count on the legislation they had lobbied for in the first place. We have experienced exactly this in the debates over binding targets for biofuels. But the decision-makers are not innocent, of course not! They lost their reliability entirely in 2009 when they carried on with legislation for the binding biofuels targets and opened the door for various subsidies – in spite of mounting evidence showing that biofuels were neither environmentally nor socially a sustainable option⁹.

Renewable Energy – Where does it come from?

It is noteworthy that the total energy consumption (in the EU-28) has remained almost constant since 1995 despite repetitive intent on saving energy. At the same time Europe is also becoming more and more dependent on imported energy, in spite of intent on increased self-sufficiency. On top of this, the EU countries has outsourced a large share of the energy consumption that is related to our use of especially industrial products.

Regarding ‘renewable energy’ (RE), the total share (i.e. bioenergy, wind, solar, etc.) constituted 5% of total energy consumption in 1995. This proportion had in 2013 increased to approximately 12%, of which the 7.7% came from biomass and renewable waste; 1.9% from hydro; 1.2% from wind; 0.6% from solar; 0.4% from geothermal; and 0.0% from tide, wave and ocean¹⁰. Approximately 65% of the ‘renewable energy’ consisted of bioenergy this year.

Greenhouse gas emissions appear to decrease, namely around 18% between 1990 and 2012 (according to the Kyoto methodology)¹¹, but it is partly based on the false premise that bioenergy is considered to be CO₂-neutral. John Upton from Climate Central explains it in this way: “*The accounting trick allows the energy industry to pump tens of millions of tons of carbon dioxide into the air every year and pretend it doesn’t exist*”¹².

Regarding the future use of renewable energy (RE), the current targets are:

- a 20 % target for the overall share of energy from renewable sources
- a 10 % target for bioenergy from renewable sources in transport

Individual member states have different targets. The member states have made National Renewable Energy Action Plans (NREAPs) with a plan for how to meet the RE targets in both electricity, heating and transport. In 2010, the EU member states planned according to these NREAPs that 54% of renewable energy by 2020 will come from bioenergy, whereof solid biomass for heat and electricity is planned to constitute the bulk¹³. According to an analysis by FERN, the fulfilment of the plans

⁸ The Commission communication of 10 January 2007 entitled ‘Renewable Energy Roadmap — Renewable energies in the 21st century: building a more sustainable future’, <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52006DC0848&from=EN>

⁹ Presented by social movement organisations building their argument on scientific evidence in 2007-2008, see e.g. Agrofuels - Towards a reality check in nine key areas, June 2007: <http://www.econexus.info/sites/econexus/files/Agrofuels.pdf>

¹⁰ European Commission: EU energy in figures, Statistical Pocketbook, 2015

¹¹ Ibid

¹² John Upton: Pulp Fiction - The European Accounting Error That’s Warming the Planet, Climate Central, Oct. 20, 2015 <http://reports.climatecentral.org/pulp-fiction/1/>

¹³ Bogdan Atanasiu, The role of bioenergy in the National Renewable Energy Action Plans: a first identification of issues and uncertainties, IEEP 2010, http://www.ieep.eu/assets/753/bioenergy_in_NREAPs.pdf

regarding the electricity and heat production alone, would imply that the need for wood fuels will grow between 50 and 100%, which cannot be achieved solely by using EU's own wood resources¹⁴.

Regarding wood fuels, it is primarily pellets that are traded internationally, and the EU is the world's largest producer and consumer of wood pellets. In 2013, EU countries used 85% of all internationally traded wood pellets. EU demand is growing much faster than the production of wood pellets in the EU does, and the EU imports of wood pellets from countries outside the EU increased from less than 1.8 million tonnes in 2009 to about 4.5 million tonnes in 2012 and to more than 6 million ton in 2013. In total, approximately 19 million ton of wood pellets were burned in the EU in 2013¹⁵.

The amount of pellets traded internationally is expected to grow, depending on the size of the subsidies and requirements for sustainability¹⁶. Currently, the EU imports mainly wood pellets from the Southern United States, Canada and Russia¹⁷.

In 2012, the EU countries covered most of the demand for wood pellets via internal trade between the EU countries¹⁸. The main exporters within the EU are Germany, Austria and Latvia, while the UK, Denmark and Italy are the main importers. UK imports primarily from the US and Canada; Denmark imports mainly from Russia and the Balkans; and Italy imports mainly from Austria and Germany. In 2013, the US exported more than 2.8 million ton to the EU (up from 0.5 million. ton in 2009)¹⁹. In the future, the European energy companies expect to meet the consumption by investing in wood pellet factories, short-rotation coppice and plantations in regions such as Brazil, Uruguay, West Africa and Mozambique²⁰. The European Parliament's Directorate-General for External Policy stated in a report from 2012 that “Africa is likely to play a big role in feeding European demand for biomass,” and that “Brazil is often considered to be the EU’s most promising potential source of wood-based fuel in the Southern hemisphere.”²¹ Various reports from civil society organizations have come to similar results, including the Global Forest Coalition, World Rainforest Movement and the International Institute for Environment and Development²².

In addition, the EU has a high consumption of biofuels for transport, where imports of soya and palm oil for biodiesel production (especially from Argentina, Indonesia and Malaysia) has contributed to making Europe the world's largest producer of *biodiesel*. Concurrently, the consumption of *bioethanol* tripled in the period 2006-2012, most of which was imported from Brazil²³. In developing countries,

¹⁴ James Hewitt: Flows of biomass to and from the EU; FERN 2011,

http://www.fern.org/sites/fern.org/files/Biomass%20imports%20to%20the%20EU%20final_0.pdf

¹⁵ Alberto Goetzl: Developments in the Global Trade of Wood Pellets, Office of Industries U.S. International Trade Commission, January 2015, https://www.usitc.gov/publications/332/wood_pellets_id-039_final.pdf

¹⁶ Global Agricultural Information Network: EU-28 Biofuels Annual, 7/3/ 2014, GAIN Report Number: NL4025 http://gain.fas.usda.gov/Recent%20GAIN%20Publications/Biofuels%20Annual_The%20Hague_EU-28_7-3-2014.pdf

¹⁷ Alberto Goetzl: Developments in the Global Trade of Wood Pellets, Office of Industries U.S. International Trade Commission, January 2015, https://www.usitc.gov/publications/332/wood_pellets_id-039_final.pdf

¹⁸ A. Ernsting 2014, “A new look at land grabs in the global South linked to EU biomass policies”, Biofuelwatch, <http://www.biofuelwatch.org.uk/wp-content/uploads/A-new-look-at-land-grabs-in-the-global-South-linked-to-EU-biomass-policies.pdf>

¹⁹ Alberto Goetzl: Developments in the Global Trade of Wood Pellets, Office of Industries U.S. International Trade Commission, January 2015, https://www.usitc.gov/publications/332/wood_pellets_id-039_final.pdf

²⁰ International Energy Agency, Global Wood Pellet Industry Market and Trade Study, December 2011, www.bioenergytrade.org/downloads/t40-global-wood-pellet-market-study_final.pdf

²¹ Impact of EU Bioenergy Policy on Developing Countries, http://www.ecologic.eu/files/attachments/Publications/2012/2610_21_bioenergy_lot_21.pdf

²² See for example: “Wood-Based Bioenergy: The Green Lie”, Global Forest Coalition, May 2010, http://globalforestcoalition.org/wp-content/uploads/2010/10/briefing-paper-bioenergy_final_11.pdf 23; and “Biomass energy: Another driver of land acquisitions?”, Lorenzo Cotula, IIED, August 2011, <http://pubs.iied.org/pdfs/17098IIED.pdf>

²³ UNCTAD: The State of the Biofuels Market: Regulatory, Trade and Development Perspectives, United Nations Conference on Trade and Development, 2014, http://unctad.org/en/PublicationsLibrary/ditcted2013d8_en.pdf

both agricultural land, forests and other natural areas such as grasslands are converted to monocultures of crops for bioenergy.

EU-Policies Driving Consumption

Growth and competitiveness

In The Treaty on European Union there is a general strong focus on growth and competitiveness. Growth is also strongly expressed in the EUROPE 2020 strategy²⁴, which is a 'strategy for smart, sustainable and inclusive growth'. Sustainable growth is explained as "*promoting a more resource efficient, greener and more competitive economy*". It is striking that the word 'competitive' is used to explain 'sustainable' – and it somehow explains the difficulties we are facing as a global society trying to find a new path for development built on equity and cooperation.

In relation to the question of renewable energy the issues of growth and competitiveness is two-fold: 1) there is focus that the European industries must have good conditions in order to be able to compete on the global scale. Seen in this context, taxes on energy use as well as more expensive use of energy coming from renewable energy forms is considered as disadvantages that must be avoided; 2) at the same time it is seen as an advantage if European Industries are front-runners in the area of renewable energy. Seen in this context, it is beneficial for the EU if different forms of renewable energy are supported financially by the Community both in research and development and in practical implementation. This is the Green Growth agenda, largely supported by all member states.

When we consider the current renewable energy policies, which have materialized in large use of biofuels based on imported feedstock produced in the Global South – and expectedly much more to come in the future – there are evident contradictions between the strong focus on EU economic growth and the competitiveness of the Union on the one side and, on the other side, the more idealistic paragraphs regarding the union's external action and foreign policies, in which "human rights and fundamental freedoms, respect for human dignity, the principles of equality and solidarity" are laid down as guiding principles.

Binding targets driving consumption

The '2020 Climate & Energy Package'²⁵, which is part of the 'EUROPE 2020 strategy' sets three key targets, the

20-20-20 Targets:

- a reduction in EU greenhouse gas emissions of at least 20% below 1990 levels
- 20% of EU energy consumption to come from renewable resources
- a 20% reduction in primary energy use compared with projected levels, to be achieved by improving energy efficiency.

These targets are repeated in the Renewable Energy Directive (RED), which is the main driver of bioenergy use. In the RED it is explicitly explained that "*Energy efficiency and energy saving policies are some of the most effective methods by which Member States can increase the percentage share of energy from renewable sources, and Member States will thus more easily achieve the overall national and transport targets for energy from renewable sources laid down by this Directive.*" And the directive has indeed some wording on the need for energy savings but always in companionship with energy efficiency. Thus, with the overall focus on growth and competition in the EU, the focus on energy savings will largely be limited to what can be achieved through energy efficiency²⁶ – and not much – if any – attention will be paid to the need for energy-saving through changes in consumption patterns. The risk is therefore that the energy efficiency will be offset by increased consumption. This

²⁴ European Commission: COMMUNICATION FROM THE COMMISSION EUROPE 2020 A strategy for smart, sustainable and inclusive growth, Brussels, 3.3.2010 COM(2010) 2020 final, <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2010:2020:FIN:EN:PDF>

²⁵ http://ec.europa.eu/clima/policies/strategies/2020/index_en.htm

²⁶ There is also a directive dedicated to energy efficiency

will continue as long as life-style patterns are not addressed – and growth has prevalence – and even the aimed emission reduction target will be difficult to achieve (as inadequate as it is).

In relation to bioenergy, the 20-20-20 targets serve as drivers for increased use, specifically:

- the overall goal of generating 20% of energy from renewable resources, which tends to be achieved through bioenergy (cheap and easy) and where bioenergy currently accounts for the bulk
- the binding target of 10% of energy consumption in the transport sector to come from renewable sources, mostly biofuels (whereof up to 7% may be 1st generation biofuels based on food crops).

The binding target for reduced emissions is undermined by bioenergy counting as CO₂-neutral. This means that, while it looks as if the EU is moving in the right direction regarding emission reductions, this is only on the paper.

Besides the mandatory targets for the use of renewable energy and biofuels for transport, a wide range of other subsidies exists supporting bioenergy in various forms, for example:

- tax -exemptions (thanks to alleged CO₂-neutrality)
- support programs for establishing ‘bio-plants’ (e.g. for biogas, biomass cogeneration of heat and power, biofuels) and for running the plants
- a steady flow of research and development funds, for example through the EU ALTENER program or through national programs
- support programs for production of the raw material for bioenergy in agriculture and forestry (e.g. through the rural development programs).

EU development policies – a combination of trade and aid

While the EU renewable energy policies are the driving force for increased bioenergy consumption, the trade and aid policies are facilitating increased land-use in the South.

The EU development policies must be seen in the context of how the EU interconnects with third countries in relation to use of raw material, specifically in this case, biomass. First of all, the EU has an overall trade deficit regarding raw material. Specifically in relation to bioenergy, in recent years, vegetable fats and oils and oilseeds have reached a record large share of imports²⁷. Furthermore, according to Eurostat, the context of European trade in relation to raw materials is that:

“The EU is the world’s foremost trader in agricultural products. Europe imports mostly basic agricultural commodities, but its exports are based on high-quality farm products and other processed agricultural products”, and that “The European Union, due to the characteristics of the European industrial base, is highly dependent on imports of raw materials for its competitiveness and for its economic development.”

Thus, it is understandable – although not admirable – that the EU is tempted to use development aid programmes to support the need for raw material in order to make the European industries ‘competitive’, and facilitate growth in the European Community. This is reflected in the current EU program for aid, which goes under the name Agenda for Change²⁸. It aims to direct EU aid towards the countries that need it the most and is focused on poverty reduction. However, there is a strong focus on trade and developing countries’ access to world markets in the Agenda for Change, and furthermore a program “Aid for Trade” is directly linked to “support partner countries’ efforts to develop and expand their trade as leverage for growth and poverty reduction”. This support can for instance be directed towards transport infrastructure or investments in agriculture²⁹. In the Agenda for

²⁷ Eurostat, Statistics Explained, online at: http://ec.europa.eu/eurostat/statistics-explained/index.php/Extra-EU_trade_in_primary_goods

²⁸ European Commission, EU Communication on the Agenda for Change, online at: https://ec.europa.eu/europeaid/policies/european-development-policy/agenda-change_en

²⁹ European Commission, Aid for Trade: <http://ec.europa.eu/trade/policy/countries-and-regions/development/aid-for-trade/>

Change one (out of two) overall priority areas reads: *“Inclusive and sustainable growth. The idea is to help create growth in developing countries – so poor people have the means to lift themselves out of poverty. It will target:*

- *Social protection, health, education and jobs creation, to make growth inclusive.*
- *Business environment, regional integration and access to world markets*
- *Sustainable agriculture and energy.”*

It is the two latter targets that serve as drivers for expansion of bioenergy production in the South. In the second target, especially the focus on access to the world market as a main priority for EU aid programmes is alarming as it supports the whole idea of changing food to commodities traded globally, thus undermining food sovereignty. When the EU has world market access as a high priority, it opens the door for EU investment in infrastructure such as roads and harbours that support exports of raw material and the looting of countries and continents. It also sends a strong signal to European and regional investment banks to do the same. And, in relation to bioenergy production, it eases the plundering of the Global South for biomass in various forms that they need for their own populations.

The third target aims to promote ‘sustainable agriculture’ in order to assure *“economic and environmental sustainability, adequate farmer incomes, productive capacity for the future, improved food security and social sustainability”*³⁰. When this comes from the EU, it rings an alarm bell. Although it all sounds very nice when you read the intentions of the programmes, the language leaves room for interpretation in a way that fits agribusiness as much as it fits small-scale sustainable farming. For instance, when it is argued that *“Supporting sustainable agricultural development involves ensuring and maintaining productive capacity for the future and increasing productivity without damaging the environment or jeopardising natural resources”*, the reference to increased productivity without jeopardising natural resources, unlikely refers to organic or permacultural methods (although one might think so), but rather to the kind of agriculture that agribusiness calls ‘sustainable’. And when they write that *“In addition, it requires respect for and recognition of local knowledge and local management of natural resources, and efforts to promote the capabilities of current generations without compromising the prospects of future ones”*, it hardly means that EU aid money will only be used if the agricultural practices supported bring an unspoiled environment on to future generations, where soil and biodiversity are not depleted; rather it means that old-fashioned knowledge and practices must not stand in the way for progress! These sceptic expectations are not taken out of the blue. It is written between the lines, that EU support is for what is often explained as an ‘efficient form’ of agriculture meaning agriculture with a high input of pesticides, fertilisers, machinery and land and a low input of working hours and often also low output per square meter. This is also confirmed by the EU participation (through the G8) in ‘The new alliance for Food Security and Nutrition’ described by EcoNexus³¹ in the following way:

“The aims of the Alliance are to identify suitable land for investors; to help the private sector to control and increase the use of agricultural inputs (fertilisers) and ‘improved’ (hybrid or GM) seeds and halt the distribution of free and ‘unimproved’ seeds (farmer varieties, often well adapted to local conditions and needs); and to mobilise public services to assist investors.”

As part of the 2030 Agenda for Sustainable Development, future EU development plans are doomed to be (even more) focused on private investment, as a large share of the money for development aid will be used attract private funding (so-called ‘blending’)³². This poses a risk for more private acquisition

³⁰ European Commission, Building partnerships for change in developing countries, Sustainable agriculture and rural development policy - agricultural development: https://ec.europa.eu/europeaid/sectors/food-and-agriculture/sustainable-agriculture-and-rural-development/agricultural-development_en

³¹ In: Helena Paul and Ricarda Steinbrecher: “African Agricultural Growth Corridors and the New Alliance for Food Security and Nutrition. Who benefits, who loses?”, EcoNexus, June 2013, http://www.econexus.info/sites/econexus/files/African_Agricultural_Growth_Corridors_&_New_Alliance_-_EcoNexus_June_2013.pdf

³² European Commission, The 2030 Agenda for Sustainable Development, online at: https://ec.europa.eu/europeaid/policies/european-development-policy/2030-agenda-sustainable-development_en

of land for bioenergy in the global South. As an example, the EU proposes to facilitate climate action through blending: “Through climate change windows in the EU regional blending facilities and the Global Energy Efficiency and Renewable Energy Fund (GEEREF), the EU is scaling up its climate finance”³³, and amongst the objects for GEEREF is biomass for renewable energy³⁴.

2 Bioenergy Use in Europe

Unequal Use of Land

The use of land for production of bioenergy on a large scale is the over-all cause for mounting problems related to the use of bioenergy, especially: loss of livelihoods, increased emissions of greenhouse gasses, soil and water depletion and loss of biodiversity.

The land used to be used for something else. Therefore, the use of biomass for energy is in competition with other uses. The proponents of large-scale bioenergy seem to forget this.

If we want to make sure that EU use of biomass for energy is not inflicting seizure of land on other continents, it is not enough to look at whether the biomass is produced on the EU's own fields or in the EU's own forests. We must also look at whether the biomass from these areas was previously used for something else, which then will be produced somewhere else – and give rise to 'Indirect Land Use Change'. When production of the feedstock for bioenergy production takes place, both direct and indirect land use changes occur, which both can lead to increased land seizures. Only reduction in consumption patterns (regarding food, fodder, textiles, paper, chipboard, timber etc.) can limit the indirect land use changes that otherwise will inevitably take place when more land is used to produce biomass for energy.

The bioenergy used in the EU is already a combination of European and imported biomass and the plans for future use of bioenergy in the EU goes further beyond the capacity for production within the EU. It is therefore vital to have an idea of how much land is actually necessary to meet the future EU consumption – both within the EU and in the rest of the world.

'Land footprint' can be used to describe the amount of land, that is required to produce the goods and services used within a country or a region, including the area associated with the consumption of imported products. Europe is already one of the biggest consumers of agricultural land and heavily dependent on imported land³⁵. Compared to other renewable energy sources, all kinds of bioenergy have a much larger land footprint, and increased bioenergy consumption will increase the European land footprint.

In 2010, Friends of the Earth stood behind an analysis³⁶ of the land footprint related to the fulfilment of the EU member countries' plans for how they would meet the targets for use of renewable energy (according to the 20-20-20 targets). They found that the total crop footprint was 55 000 km² in 2010 growing to 131 000 km² in 2020. The total forest land footprint was 390 000 km² in 2010 growing to 435 000 km² in 2020³⁷. If this was all produced in Europe, the land areas used in 2010 would equivalent to 4.6% of the total currently cultivated agricultural area growing to 10.9% in 2020. For the forest area the area used in 2010 would equivalent 29.2% of the total forest area in Europe, growing to

³³ European Commission, Financing global sustainable development after 2015, online at:

https://ec.europa.eu/europeaid/sites/devco/files/post-2015-development-infograph-final_en.pdf

³⁴ <http://geeref.com/about/investment-strategy.html>

³⁵ European Environment Agency: EUbioenergy potential from a resource-efficiency perspective, EEA Report No 6/2013,

³⁶ Liesbeth de Schutter and Stefan Diljum, University of Economics and Business: “A calculation of the EU Bioenergy land footprint”, WU, March 2014,

https://www.foeeurope.org/sites/default/files/agrofuels/2015/foee_bioenergy_land_footprint_may2014.pdf

³⁷ The authors used the following assumptions regarding the forest land footprint: The area of the primary forest resources is calculated to be 4.4 ton / ha / year (based on an average of the technically possible harvest rates in European forests and on the knowledge of the structure and age of the EU's forests. (4.4 ton/ha/year is not necessarily a sustainable level). It is not taken into account that harvest rates will be different for imported wood fuels.

31.6% in 2020 (taking into account the EU's increasing forest area)³⁸. According to the analysis, the consumption of bioenergy is expected to double by 2030, which means that the EU will have use a land and forest area the size of Sweden and Poland together to cover its needs for bioenergy if the plans are carried through.

Maize is expected to become the main feedstock for bioethanol with imported sugar cane in second place, while rapeseed is expected to be the primary feedstock for biodiesel, yet with a large proportion of imported soya and some imported palm oil³⁹. The increasing land use in Europe for maize and rape seed and other crops dedicated biofuels production will initiate indirect land use changes globally.

The so-called second generation biofuels (produced from cellulosic plant residues such as straw using enzymes) have been hyped for years by the biotech industry who argue that they will not cause the same problems as the first generation produced from food crops. Nevertheless, second generation biofuels (also named 'advanced biofuels' by the proponents) take up a surprisingly small proportion in the projected plans for 2020⁴⁰. This is particularly striking because it was an important part of the debate before the adoption of the RED (in 2009), that it was necessary to set binding targets to pave the way for the second generation – even if the targets would be satisfied with the first generation fuels. Most NGOs were critical of this argument with reference to the fact that second generation biofuels were very far from being economically viable – and their prediction has proven to be right.

Social movement organisations are also critical of second generation biofuels because the intention is to produce them on the basis of plantation wood (possibly even wood that has been genetically modified to be more easily degraded by enzymes provided by the genetic engineering enterprises⁴¹). If this becomes a reality, they will cause the same problems in relation to land use change as with the first-generation biofuels. Furthermore, soil fertility is at risk, when more plant residues (straw etc.) is removed from the fields to be used for second generation biofuels.

Another study⁴² looked at the amount of biofuels to be used by the member states in 2020, and the implications of this on land use when ILUC (indirect land use changes) were included. Some conclusions from the report were, that biofuels would amount to 9.5% of the total energy consumption in the transport sector by 2020; and that 92% of those would come from first generation biofuels from food crops such as rapeseed, palm oil, sugar cane, sugar beets or wheat. 72% would be biodiesel and 28% bioethanol. Overall, approximately 50% of the anticipated consumption of bioethanol and approximately 41% of biodiesel would be imported to the EU.

A third study⁴³ investigated in detail into which countries or regions will most likely provide the raw material for the extra amount of biofuels to be used in the EU in the coming years. This study also looked at which types of land had been prior to the use of land for biofuels raw material – and found that forests, grasslands and shrub steppes are all exposed. Brazil is the country that will probably allocate most land for the fulfilment of the European countries' plans if they are implemented, followed by the Commonwealth of Independent States, Sub-Saharan Africa, the Latin American countries, Indonesia and Malaysia, and then the EU27.

³⁸ Liesbeth de Schutter and Stefan Diljum, University of Economics and Business: "A calculation of the EU Bioenergy land footprint", WU, March 2014,

³⁹ Ibid

⁴⁰ Ibid

⁴¹ Rachel Smolker, Biofuelwatch: Cellulosic Ethanol: Firsts, Failures, Myths and Risks: http://www.huffingtonpost.com/rachel-smolker/cellulosic-ethanol-firsts_b_5804592.html

⁴² Institute for European Environmental Policy: 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; November 2012 http://www.greenpeace.org/austria/Global/austria/dokumente/Reports/wald_IEEP-Report-agrotreibstoffe_2010.pdf

⁴³ L. Marelli, F. Ramos, R. Hiederer, R. Koeble: Estimate of GHG emissions from global land use change scenarios, JRC 2011, http://iet.jrc.ec.europa.eu/sites/default/files/documents/scientific_publications/2011/technical_note_eu24817.pdf

This increased land use related to the EU bioenergy use must be seen in the context of both the ongoing global loss of biodiversity, water scarcity, food scarcity in some regions and climate change – all affected by land use changes.

Livelihoods Destruction

Coming back to the EU program for aid, Agenda for Change⁴⁴, and the first target “*social protection, health, education and jobs creation, to make growth inclusive*”, there is evidence from many parts of the world that when land is transformed into the production of crops or plantations, this transformation has not been beneficial for small farmers neither in relation to securing a steady income, their health nor food security⁴⁵.

The land transformed may previously have been common land, where local or national governments have turned over the rights to use the land for a long time period to a company within agriculture, forestry or bioenergy. Or it may be land owned by small-holders, who are persuaded to enter contract farming agreements in order to produce crops for biofuels. Either way, it undermines the local food production and local jobs. Large monocultures are rarely leading to local jobs (except maybe in the phase when they are established) but rather to low-paid (and sometimes abusive) jobs for migrant workers. In most cases, there are anyway only very few jobs related to the monocultures productions as is for instance the case with soya for biodiesel⁴⁶.

The people living close to fields or plantations with monocultures for bioenergy are exposed to poisonous pesticides and excess nutrients through air and water. They are also exposed to adverse climatic condition at the local level due to a change in vegetation often leading to extremely hot conditions when trees have been felled to give space for crops or plantations⁴⁷. Local communities living near fields with crops for bioenergy are facing difficulties to grow vegetables and keep animals because of the toxic environment and they are likely to lack water for their own food production, when water has been dispersed to the thirsty monoculture. Thus the growth that the production of raw material for bioenergy may deliver for the national economy in the country where it takes place rarely – if ever – improves the lives of the rural population and, therefore, cannot be referred to as ‘inclusive’.

Undermining the Emission Reduction Targets

Bioenergy is said to be used in order to reduce emissions from energy consumption, and, as we have seen, bioenergy is in fact the most prominent response at all suggested to reduce emissions related to the EU energy consumption. However, there is a profound contradiction between the emission reduction targets and the use of bioenergy, as the emissions from the bioenergy may be larger than the burning of the fossil fuels they are substituting would have been. But this is not reflected when the emissions are reported to the UN – nor is it communicated to the European public.

When reporting emissions at the UN level, the Intergovernmental Panel on Climate Change (IPCC) decides on methodologies on how to calculate and report emissions in the ‘National Greenhouse Gas Inventory Reports’. However, the method recommended for calculating and reporting emissions

⁴⁴ European Commission, EU Communication on the Agenda for Change, online at:

https://ec.europa.eu/europeaid/policies/european-development-policy/agenda-change_en

⁴⁵ See e.g.: Anseeuw W., Alden Wily L., Cotula L., Taylor M., 2012. “Land Rights and the Rush for Land” The International Land Coalition, CIRAD and the International Institute for Environment and Development, Rome 2012: <http://www.cirad.fr/en/publications-resources/publishing/studies-and-documents/land-rights-and-the-rush-for-land> or: Isis Alvarez and Rachel Smolker: “A GLOBAL OVERVIEW OF WOOD BASED BIOENERGY: PRODUCTION, CONSUMPTION, TRENDS AND IMPACTS”. Global Forest Coalition, 2014: <http://globalforestcoalition.org/wp-content/uploads/2010/06/REPORT-WOOD-BASED-BIOENERGY-FINAL.pdf>

⁴⁶ Winfridus Overbeek, Markus Kröger and Julien-François Gerber: “An overview of industrial tree plantations in the global South, ejolt report no.3, 2012: http://www.ejolt.org/wordpress/wp-content/uploads/2012/06/120607_EJOLT-3-plantations-lower.pdf

⁴⁷ For instance, documented by Inge Altemeier in the film: “Lost in palm oil”, 2007: <http://www.cultureunplugged.com/play/6846/Lost-in-Palm-Oil>

related to the production and use of biomass is set to cause misinterpretations, and is one of the main reasons why bioenergy has come to play such a large and devastation role as a ‘renewable energy’ source.

According to the IPCC Guidelines, CO₂-emissions from the combustion of biomass are reported as zero, although the IPCC does not consider biomass used for energy to be ‘carbon neutral’ since direct and indirect land use changes caused by biomass production can result in substantial greenhouse gas emissions.

The IPCC explains the reason for the methodology of reporting combustion of biomass as zero (in the energy sector) with the fact that the CO₂-emissions from land-use changes are supposed to be accounted for in another sector, namely in the Land-use, Land-use change and Forestry (LULUCF) sector – and therefore there would be a ‘risk’ of double counting.

Thus, the main reason why the emissions ‘from the chimney’ is counted as zero in the energy sector is “*to avoid double counting*”. It is easiest to explain with an example⁴⁸. If for instance a tree is felled in Siberia and burned in Denmark, Russia should report the carbon bound in the removed tree as emissions (carbon lost) from the LULUCF sector. If the carbon emissions from the chimney in the Danish power plant was to be reported, it would (according to IPCC logic) be counted twice. In reality, it is not all countries that need to count the emissions from the LULUCF sector⁴⁹. Therefore, when the EU imports biomass for energy, there is no legally binding procedure to assure that the emissions will be accounted for anywhere in the global emission reduction accounting system. The situation becomes even more complicated by the fact that even locally produced biomass for energy (not traded across borders) can contribute to indirect land-use changes in other countries by displacement and thereby cause emissions elsewhere.

We can conclude that, for the IPCC, double counting is worse than not counting at all.

Consequently, the IPCC methodology is insufficient considering the urgent need to reduce emissions, and furthermore, it contributes to put a smoke screen over what is actually happening when biomass for energy is traded across borders and subsequently burned in the EU. Nevertheless, the described loopholes in the methodology are exploited to the full by the bioenergy companies⁵⁰ and their allies as well as by the governments in the EU member states.

The combination of the European Emission Trading System (ETS) and the fact that CO₂ emissions are falsely counting as ‘zero’, when bioenergy is burned in the heat and power facilities, add to the problem. The emissions are not counted where they happen and other facilities are therefore allowed to burn extra fossil fuels (under the ETS).

One also has to note that, while the emission reporting in relation to bioenergy is complex, it is also reductionist in the sense that it only focuses on carbon (stocks, emissions and uptakes), and wider aspects of sustainability are not taken into consideration. A monoculture, which will lead to increased carbon in the terrestrial carbon stock and deliver bioenergy at the same time⁵¹, therefore tends to look very attractive, although it may be connected to a number of adverse side effects i.e. depletion of the water resources, loss of biodiversity or reduced food production.

⁴⁸ For a more thorough explanation, read e.g.: “Opinion of the EEA Scientific Committee on Greenhouse Gas Accounting in Relation to Bioenergy”, European Environment Agency, Scientific Committee, 15 September 2011

⁴⁹ Only the Annex 1 countries have a binding obligation to report according to the ‘Good Practice Guidance for LULUCF’; Non-Annex1-countries (mostly developing countries) are only “encouraged” to do so.

⁵⁰ The upfront emissions are acknowledged by the bioenergy companies but they claim that even though the initial emissions may be huge when forest- or grassland is transformed into plantations for bioenergy, it will be beneficial for the climate on the long term when short rotation, fast growing plantations are continuously growing, felled and re-growing. The rationale is that when this has happened enough times the upfront emissions that happened in the first place will be re-sequestered and, at the same time, the fossil fuel burning will be reduced.

⁵¹ which may in some cases be possible for instance when perennial bioenergy crops are planted on cropland

Land-Use Changes – the Culprits behind Biodiversity Destruction

The relationship between bioenergy production and biodiversity is multifaceted, but the main overall problem is that feedstock for large-scale bioenergy production will in most cases come from monocultures whether it is monoculture agricultural crops or monoculture plantation trees. Monocultures are by definition not bio-diverse and lots of effort and chemistry is put into the production to assure that the cultivated plant is in minimum competition with other plants regarding access to light, water and nutrients. Viable ecosystems are, on the other hand, dependent on the interaction of (living and dead) plants, fungi, bacteria, insects, animals and birds etc. that are not found in a monoculture of plants. Therefore, the increased land-use for bioenergy is adding to the already severe state of biodiversity globally.

The increased exploitation of plant material within both forests and plantations and on agricultural land is also problematic for biodiversity. When less plant material is left to decay on the forest floor or in the agricultural soil, it is harmful to all the many species depending on decaying organic matter and on soil fertility.

In response to the severe human-induced changes to ecosystems and the extinction of species seen in the last 50 years, the European Community has, in 2011, adopted an EU biodiversity strategy to 2020, which sets a headline target to “*halt the loss of biodiversity and ecosystem services by 2020, to restore ecosystems in so far as is feasible, and to step up the EU contribution to averting global biodiversity loss*”. According to the Commission’s mid-term review of the EU biodiversity strategy from 2015⁵², there is small but insufficient progress in some areas but overall, no significant progress is found and much stronger efforts are needed to meet the target by its deadline.

The mid-term review does not mention the linkage between the biodiversity status and bioenergy production. However, Target 3 in the EU biodiversity strategy to 2020 focuses specifically on “*the contribution of agriculture and forestry to maintaining and enhancing biodiversity*”, and finds a “*continuing decline in the status of species and habitats of EU importance associated with agriculture*”. Farmland birds are continuously in decline as are the wild bees and the butterflies of the grasslands. When it comes to forests, the review finds that while the EU forest area has increased since 2010, “*the conservation status of forest habitats and species covered by EU nature legislation shows no significant signs of improvement. [...] The vast majority of assessments remain unfavourable (80 %)*”.

The poor conditions described regarding biodiversity changes in Europe can be applied for the rest of the world to the degree that bioenergy production occupies and exploit more land, while at the same time animal husbandry also occupies more land and consumption of wood based products is increasing.

There is even also a devilish linkage between European protection of biodiversity and increased land use in the South, as nature protection is also to be considered a form of land use change that can induce indirect land use changes elsewhere. There is a huge risk that this will be the result of enhanced action for nature and biodiversity protection in Europe if it is not accompanied with reduced consumption.

The EU biodiversity strategy to 2020 has a target regarding EU’s role on the global scene, and the mid-term review finds some progress as “*the EU has taken initial steps to reduce indirect drivers of global biodiversity loss [...] and to integrate biodiversity into its trade agreements*”. But on the other hand “*progress is insufficient in reducing the impacts of EU consumption patterns on global biodiversity*”. This is the problem spot on. Regulations cannot solve the global biodiversity losses, when overall consumption is too large. And EU ecological footprint is indeed too large the review shows, as EU citizens occupy more than twice the biocapacity available per person globally.

⁵² Report from the Commission to the European Parliament and the council the mid-term review of the EU biodiversity strategy to 2020, COM/2015/0478, <http://www.ipex.eu/IPEXL-WEB/dossier/document/COM20150478.do>

The European Community has signed up to the United Nations Convention on Biological Diversity (CBD) at the 1992 Rio Earth Summit. Under this convention the Aichi Biodiversity Targets were decided in 2010⁵³. Amongst the targets, some can be directly connected to consumption of bioenergy, e.g. in target 3: “By 2020, at the latest, incentives, including subsidies, harmful to biodiversity are eliminated, phased out or reformed in order to minimize or avoid negative impacts [...]” and in target 4: “By 2020, at the latest, Governments, business and stakeholders at all levels have taken steps to achieve or have implemented plans for sustainable production and consumption and have kept the impacts of use of natural resources well within safe ecological limits.” These two targets address the size of consumption. But they are vague, as when the need to eliminate harmful subsidies is moderated towards the weaker expression ‘reformed’, which opens the door for ‘sustainable’ exploitation.

The United Nations Environment Programme (UNEP) has repeatedly pointed to the globalization of agriculture and inappropriate agricultural policies as one of the main drivers towards loss of species and stressed the fact that it has also replaced diverse smallholder farms with larger monoculture enterprises⁵⁴. UNEP also repeats the huge rise in consumption of biofuels as an important driver for extra pressure on the land, and state that large-scale commercial agriculture – including for biofuels – has affected biodiversity adversely^{55 56}.

Freshwater Affected by Bioenergy Production

Water is already a scarce resource in many parts of the world. The expansion and intensification of bioenergy production will inevitably add to existing pressures⁵⁷. A marked characteristic of both agricultural crops and plantation trees, grown to produce bioenergy, is fast growth, which is dependent on an abundant water supply. Thus the competition for land is accompanied by competition for water. According to UNEP⁵⁸ “Agriculture is by far the largest global water user, with withdrawals for this purpose being unsustainable in many places due to unbalanced long-term irrigation water budgets, as evidenced by the mining of aquifers and reliance on large water diversion projects”. Fast-growing bioenergy monocultures are set to increase this problem.

Unlike the EU policies for biodiversity and climate, the EU policies for water concern only European waters and how they are influenced by human activity. There is no reference to how European consumption indirectly affects freshwater resources in other regions.

In a summary report by United Nations Environment Programme (UNEP)⁵⁹, from 2011, it is recognized that bioenergy production systems can influence both the quality and the quantity of water; and both nearby and over long distances, with resulting consequences for biodiversity and human needs. The freshwater quality near the primary biomass production sites can be affected directly through run-off from intensive agricultural production leading to pollution from fertilizers and different types of pesticides (herbicides, insecticides and fungicides). Tillage, ploughing and irrigation of unsuitable soils can lead to sediment run-off to water bodies causing physical and chemical impacts. Furthermore, the increased removal of plant residues or growing of trees without undergrowth can

⁵³ Aichi Biodiversity Targets: <https://www.cbd.int/sp/targets/default.shtml>

⁵⁴ Global Environment Outlook GEO 4: Environment for development, United Nations Environment Programme, 2007, <http://www.unep.org/geo/geo4.asp>

⁵⁵ Global Environment Outlook GEO 5: Environment for the future we want”, United Nations Environment Programme, 2014, http://www.unep.org/geo/pdfs/geo5/GEO5_report_C5.pdf

⁵⁶ The adverse effects relate to both forests and natural lands (being turned into monocultures) and diversity of species used in agriculture (agro-biodiversity).

⁵⁷ United Nations Environment Programme (UNEP), Oeko-Institut and IEA Bioenergy Task 43, “The bioenergy and water nexus”, 2011, available online at: http://www.unep.org/pdf/water/Water_Bioenergy_FINAL_WEB_VERSION.pdf

⁵⁸ Global Environment Outlook GEO 5: Environment for the future we want”, United Nations Environment Programme, 2014, http://www.unep.org/geo/pdfs/geo5/GEO5_report_C5.pdf

⁵⁹ United Nations Environment Programme (UNEP), Oeko-Institut and IEA Bioenergy Task 43, “The bioenergy and water nexus”, 2011, available online at: http://www.unep.org/pdf/water/Water_Bioenergy_FINAL_WEB_VERSION.pdf

increase soil erosion and lead to reduced ability of precipitation to penetrate soil and replenish groundwater supplies.

3 Recognizing Problems – Responding with Non-Solutions

Policy Coherence for Development

The EU has evaluated itself in relation to the EU & Millennium Development Goals; and found that: “*With regards to developing a global partnership for development, the EU’s commitment to Policy Coherence for Development (PCD) makes the EU a forerunner on the international stage in this area.*”⁶⁰ So, let’s take a closer look at the PDC:

Through the Policy Coherence for Development (PCD), the EU is meant to take account of development objectives in all of its policies if they are likely to affect developing countries. “*It aims at minimising contradictions and building synergies between different EU policies to benefit developing countries and increase the effectiveness of development cooperation.*”⁶¹ In the EU understanding, the commitment to ensuring PCD is to be considered “*a key contribution to the collective global effort towards sustainable development in the post-2015 context*”.

The latest review on how the EU community is succeeding in implementing its aim to account of development objectives in all of its policies is the Policy Coherence for Development 2015 EU Report⁶². Reading the report, one should think that the EU is doing really well, and the report asserts that progress is ongoing at both EU and member states’ levels. This is in contrast to the findings in this paper. Clearly, this consideration has not been fulfilled in relation to the EU renewable energy policies considering the extra strain they put on developing countries with consideration to increased land-use, climate change, biodiversity-loss and water consumption – impacts that will all hit on the rural population in the South the most.

The only mentioning of any negative influence brought on by the EU renewable energy is a reference to country-level dialogues, where “*the biofuels/food security/land use nexus were often mentioned*”.

Otherwise, when it comes to considerations over Food Security, the report focuses entirely on what is referred to as ‘significant progress’ in the Common Agricultural Policy, namely (basically) that “*The systematic use of export refunds to subsidise EU farm prices on the global market has been stopped since January 2014.*” (This does not mean that EU public funds are not used to subsidise exports – it is just not done on a systematic basis and export funds are “currently set at zero”; and, in reality, all the other subsidies given to EU farmers function indirectly as export subsidies). On this basis, the Commission concludes in the review that “*agriculture and food security are areas where the EU’s efforts to enhance policy coherence for development are showing results*”. There is no mentioning of how EU policies are influencing land-use in developing countries, and hence no considerations regarding how this may impact food security in the countries where this may happen. (This is in contrast with the reporting from UNEP, who have repeatedly pointed to problems related to production of feedstock for biofuels (see 2.4 and 2.5)).

Regarding the review of the Policy Coherence for Development in relation to climate change, the report is even more rambling, claiming that “*The EU continues to show leadership and determination to tackle climate change and environmental protection*” with reference to EU climate and renewable energy policies. Moving on to emissions from deforestation and forest degradation in developing countries, the review highlights a yearly EU support of EUR 25 million to initiatives piloting REDD+ in Asia, Africa and Latin America, which as seen from the social movement’s perspective is money

⁶⁰ European Commission, The EU’s Contribution to the Millennium Development Goals: http://ec.europa.eu/europeaid/sites/devco/files/brochure-mdg-2015_en.pdf

⁶¹ European Commission, Policy Coherence for Development, online at: https://ec.europa.eu/europeaid/policies/policy-coherence-development_en

⁶² European Commission, COMMISSION STAFF WORKING DOCUMENT Policy Coherence for Development 2015 EU Report, SWD(2015) 159 final, Brussels, 3.8.2015, https://ec.europa.eu/europeaid/sites/devco/files/policy-coherence-for-development-2015-eu-report_en.pdf

given to a destructive initiative that in most cases does more harm than good. Again, there is no mentioning of EU renewable energy policies driving land-use changes including forest destruction.

The PCD report continues to tribute the EU's "*leading role in promoting high levels of environmental protection in the negotiation of new agreements or amendments to Multilateral Environmental Agreements (MEA)*". With regards to biodiversity, this is something "*the EU has continued to pursue efforts to mainstream biodiversity objectives into development policy*", (again) with no considerations as to how the EU agriculture and energy policies are driving towards increased land areas with monocultures. The 'sustainable management of natural resources' is repeated several times in the review. From the social movement's perspective, this is an empty phrase – or even worse, just a cover-up for green-washing of the continuous looting of natural resources, when it is said in a context of the free trade regime, which is of the highest priority for the EU.

Hence, the EU trade regime is of major interest also in relation to the PCD review, which finds that "*Trade remains crucial for economic growth and sustainable development.*" Therefore, it is explained, "*Economic Partnership Agreements (EPAs) have a specific development focus including development cooperation as an essential element of implementation*" and "*Negotiations for modern and comprehensive Free Trade Agreements are also on-going with emerging economies and developing countries in Asia, the European neighbourhood and Latin America*". More than one third of the EU budget for development aid is directed to support trade and "*specific Aid for Trade (AfT) programmes are conceived to help developing countries reap the benefits of new trade deals*".

It never stops. The EU and its Member States boast to be the most important AfT donor in the world with Africa the most important recipient of AfT programmes. The way the EU assures that the AfT programmes are in compliance with the overall aim of the EU program for development cooperation is by promoting 'sustainable development' including environmental protection in all trade agreements.

Furthermore, as "*the private sector is considered as an essential partner in the fight against poverty*", the Commission defined in 2014 "*its expectations of the private sector in terms of Corporate Social Responsibility and development*".

The Policy Coherence for Development 2015 EU Report⁶³ highlights specifically how "*The EU has been a frontrunner in providing Duty-Free-Quota-Free access to all goods (except arms and ammunition) from LDCs through the Everything-But-Arms Initiative (EBA).*" And further – regarding the Least Developed Countries (LDCs) the review is arguing that an independent study has demonstrated that the EU trade policy has "*significantly increased the exports of developing countries and contributed to their economic diversification. This double impact is greater for Least Developing Countries*". However, when looking closer into the study referred to⁶⁴, it appears that while there has been a decrease (over the last 40 years) in the share of agricultural products in the value of EU imports from all regions, accompanied by an increase in the share of manufacturing products, this trend has not been as marked for the LDC countries. Many LDC countries mainly export agricultural products. "*Among the countries for which EU imports have remained highly concentrated around agricultural goods are the Solomon Islands located in the region of East Asia and the Pacific, the Maldives located in South Asia, and a number of SubSaharan countries including Malawi, Rwanda, Togo, Uganda, Tanzania, Guinea Bissau, The Gambia, Ethiopia and Burundi, for all of whom agricultural products account for more than 80% of EU imports.*" When this is seen in the context of the EU policies for renewable energy, as well as the EU Aid for Trade scheme, it is clear that there is a huge risk for further exploitation of especially the African land in order to deliver bioenergy for Europe – supported by 'Duty-Free-Quota-Free access' to the EU market.

⁶³ European Commission, COMMISSION STAFF WORKING DOCUMENT Policy Coherence for Development 2015 EU Report, SWD(2015) 159 final, Brussels, 3.8.2015, https://ec.europa.eu/europeaid/sites/devco/files/policy-coherence-for-development-2015-eu-report_en.pdf

⁶⁴ Directorate-General for International Cooperation and Development, EU Development Policy and International Cooperation, Policy and Coherence, Economic Analysis Team. June 2015: "Assessment of economic benefits generated by the EU Trade Regimes towards developing countries", Volume 1, https://ec.europa.eu/europeaid/sites/devco/files/trade-report-2015-volume1_en_0.pdf

In this overall free trade regime, and as mentioned above, there is surprisingly little attention paid to the issue of how the EU consumption is affecting land-use in developing countries. In the few incident where there is such attention paid, it is clear that any problems are to be resolved with market mechanisms or other mechanisms that are not meant to regulate the EU consumption as such – but only to direct the consumption in a more ‘sustainable’ direction.

Certification Schemes

The problems related to the increased use of bioenergy has been partly acknowledged by the European decision makers, as it has not been possible for them to ignore all the facts presented to them by social and environmental movements during the last decade⁶⁵. The response from the EU decision makers to the huge problems regarding climate, biodiversity and livelihoods has so far only been to demand (in the Directive for Renewable Energy) that liquid biofuels have to comply with certain ‘criteria for sustainability’. These criteria are meant to ensure that biofuels will deliver what is said to be ‘substantial reductions’ in greenhouse gas emissions and that they should not come from forests, wetlands and nature protection areas. This result from the (partly) recognition by the EU, however, is far from adequate. For some NGOs, it is to some degree seen as a victory, and they continuously try to strengthen the sustainability criteria and to pressure for such criteria to be implemented also in relation to bioenergy from wooden sources. Others (including the author of this paper) nominate the introduction of sustainability criteria as merely greenwashing, arguing that “*standards and certification cannot address fundamental issues: the scale of demand, and the scale of exploitation. Instead, certification helps to legitimize such destructive models and over exploitation by providing false reassurances.*”⁶⁶ Certification schemes for bioenergy is merely a market based approach well fitted to neoliberal societies and the free trade agenda.

Corporate Social Responsibility

Another sign of (partly) recognition of the problems related to land repossession in the South is that the Commission has defined ‘expectations’ towards the private sector in terms of Corporate Social Responsibility (CSR) (described in relation to the Policy Coherence for Development). However, this is just the other coin of the use of ‘criteria for sustainability’ as certification for ‘sustainability’ is perceived to be a method to show Corporate Social Responsibility.

TNI defines land grabbing in the following way⁶⁷: “Land grabbing is essentially control grabbing. It refers to the capturing of power to control land and other associated resources like water, minerals or forests, in order to control the benefits of its use”. When corporations are directly involved in land acquisition – or land-grabbing – and thereby taking control over land (in many cases common land) that belong to someone else, the idea of CSR is absurd. Borras and Franco have investigated into the idea of some kind of Code of Conduct ‘for land deals’ (as a form of CSR) and amongst other things documented that “a Code of Conduct-framed response to land-grabbing is likely to facilitate, not block, further land-grabbing”⁶⁸.

⁶⁵ Organisations have tried to convince the politicians that both climatic, environmental, social and equity issues negatively influenced especially by the mandatory target (that the business sector is so eager to have). They have built their arguments on scientific evidence as well as reports of land conflicts, food shortages and nature degradation from the Global South.

⁶⁶ NOAH, Biofuelwatch, Econexus, Global Forest Coalition, World Rainforest Movement, Rainforest Rescue, and Corporate Europe Observatory, September 2015: “Bioenergy Out: Why bioenergy should not be included in the next EU Renewable Energy Directive”, <http://www.biofuelwatch.org.uk/wp-content/uploads/EU-Bioenergy-Briefing2.pdf>

⁶⁷ Transnational Institute: The Global Land Grab; First edition published in October 2012, revised edition, February 2013

<https://www.tni.org/files/download/landgrabbingprimer-feb2013.pdf>

⁶⁸ Saturnino Borras and Jennifer Franco: “From Threat to Opportunity? Problems with the Idea of a "Code of Conduct" for Land- Grabbing”, Yale Human Rights and Development Journal, 2-18-2014, <http://digitalcommons.law.yale.edu/cgi/viewcontent.cgi?article=1096&context=yhrdlj>

The EU is not proposing any precautions towards increased land acquisition by European companies although it is part of the Agenda for Change that the business sector shall play a prominent role.

REDD+

According to the review of the Policy Coherence for Development, the EU is somehow recognising that land-use changes contributes to emissions from deforestation and forest degradation in developing countries (although taking no responsibility for the land use changes as such). To make up for this problem the EU have supported pilot initiatives for REDD+ in Asia, Africa and Latin America. This is, from the social movement perspective, seen as a damaging initiative, because it is a market-based initiative that allows rich countries to offset their emissions by paying for forest protection or afforestation in the South. The fact that the EU (and the UN) makes no distinction between plantations and natural forests constitutes a particular problem, because it implies that the conversion of grasslands into plantations may offset European emissions. In practice, large forest companies under the guise of ‘afforestation’ can justify land-grabbing for the production of timber, paper and bioenergy. This has paved the way for investment in bioenergy plantations in the South – giving revenue both through the emission-trading system and through the sale of biomass for bioenergy.

Conclusions

The current EU targets for the use of renewable energy is largely met through bioenergy use. The result is devastating in all aspects: land use, livelihoods, food security, climate, biodiversity and water, due to what must be regarded as aggressive incentives through legislation, trade and subsidy schemes, accompanied by an untruthful story told to the public.

Bioenergy has by far the largest land footprint of all renewable energy forms, and large-scale consumption will inevitably lead to increased emissions at a time when we need immediate emission reductions. A continuously large (or even growing) use of bioenergy to fulfil Europe’s excess use of energy is doomed to seize more land in the Global South – peasants’ land, common land, nature reserves – and to increase the inequalities regarding land use as well as use of atmospheric space. However, other renewable energy forms have other disadvantages related to both land use and raw material extraction, sometimes use of rare earths, and, especially in relation to dams, also water use and diversion. In his book from 2007 “Renewable Energy Cannot Sustain a Consumer Society”⁶⁹, Trainer shows how neither renewable energy sources nor the reduced energy consumption, that can be achieved through efficiency measures, will bring us anywhere near to achieving the needed emission reductions if we assume that everyone on the planet will have the same consumption patterns we in the industrialised countries have today – and it becomes even more impossible when industrialised countries claim their right to have continuous economic growth. Therefore, it is problematic that so much attention is paid to the use of renewable energy and so little to our energy-consuming lifestyle. And even more problematic is the fact that the European public are misled to believe that we are moving fast in the right direction, where the perceived CO₂-neutrality of bioenergy is playing a major role in putting a smoke-screen over the real emissions.

For the social movement, working for food-sovereignty and land-sovereignty, it is of utmost importance that we use this knowledge to reveal and expose the falsifications as a source of information to the European public. We must engage to stop the destructive use of large-scale bioenergy. The need to reduce our energy consumption dramatically should be part of the common basis for the public dialogue we engage ourselves in in order to initiate the much needed transition of European societies and lifestyles towards more self-sufficient societies and local production and consumption chains. Simultaneously, we must confront land-grabbing and the European trade and aid policies and support communities to keep or regain their rights to the land.

⁶⁹ Ted Trainer: Renewable Energy Cannot Sustain a Consumer Society, Springer 2007, see summary at: https://bravenewclimate.files.wordpress.com/2008/12/trainer_renewable_sustainable_society.pdf