

# A sustainable bioenergy policy for the period after 2020

Fields marked with \* are mandatory.

## Introduction

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EU Member States have agreed on a new policy framework for climate and energy, including EU-wide targets for the period between 2020 and 2030. The targets include reducing the Union's greenhouse gas (GHG) emissions by 40 % relative to emissions in 2005 and ensuring that at least 27 % of the EU's energy comes from renewable sources. They should help to make the EU's energy system more competitive, secure and sustainable, and help it meet its long-term (2050) GHG reductions target.

In January 2014, in its Communication on A policy framework for climate and energy in the period from 2020 to 2030,[1] the Commission stated that '[a]n improved biomass policy will also be necessary to maximise the resource-efficient use of biomass in order to deliver robust and verifiable greenhouse gas savings and to allow for fair competition between the various uses of biomass resources in the construction sector, paper and pulp industries and biochemical and energy production. This should also encompass the sustainable use of land, the sustainable management of forests in line with the EU's forest strategy and address indirect land-use effects as with biofuels'.

In 2015, in its Energy Union strategy,[2] the Commission announced that it would come forward with an updated bioenergy sustainability policy, as part of a renewable energy package for the period after 2020.

Bioenergy is the form of renewable energy used most in the EU and it is expected to continue to make up a significant part of the overall energy mix in the future. On the other hand, concerns have been raised about the sustainability impacts and competition for resources stemming from the increasing reliance on bioenergy production and use.

Currently, the Renewable Energy Directive[3] and the Fuel Quality Directive[4] provide an EU-level sustainability framework for biofuels[5] and bioliquids.[6] This includes harmonised sustainability criteria for biofuels and provisions aimed at limiting indirect land-use change,[7] which were introduced in 2015.[8]

In 2010, the Commission issued a Recommendation[9] that included non-binding sustainability criteria for solid and gaseous biomass used for electricity, heating and cooling (applicable to installations with a capacity of over 1 MW). Sustainability schemes have also been developed in a number of Member States.

The Commission is now reviewing the sustainability of all bioenergy sources and final uses for the period after 2020. Identified sustainability risks under examination include lifecycle greenhouse gas emissions from bioenergy production and use; impacts on the carbon stock of forests and other ecosystems; impacts on biodiversity, soil and water, and emissions to the air; indirect land use change impacts; as well as impacts on the competition for the use of biomass between different sectors (energy, industrial uses, food). The Commission has carried out a number of studies to examine these issues more in detail.

The development of bioenergy also needs to be seen in the wider context of a number of priorities for the Energy Union, including the ambition for the Union to become the world leader in renewable energy, to lead the fight against global warming, to ensure security of supply and integrated and efficient energy markets, as well as broader EU objectives such as reinforcing Europe's industrial base, stimulating research and innovation and promoting competitiveness and job creation, including in rural areas. The Commission also stated in its 2015 Communication on the circular economy<sup>[10]</sup> that it will 'promote synergies with the circular economy when examining the sustainability of bioenergy under the Energy Union'. Finally, the EU and its Member States have committed themselves to meeting the 2030 Sustainable Development Goals.

[1] COM(2014) 15.

[2] COM/2015/080 final.

[3] 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 (OJ L 140, 5.6.2009, p. 16).

[4] Directive 98/70/EC of the European Parliament and of the Council of 13 October 1998 relating to the quality of petrol and diesel fuels and amending Council Directive 93/12/EEC (OJ L 350, 28.12.1998, p. 58).

[5] Used for transport.

[6] Used for electricity, heating and cooling.

[7] Biomass production can take place on land that was previously used for other forms of agricultural production, such as growing food or feed. Since such production is still necessary, it may be (partly) displaced to land not previously used for crops, e.g. grassland and forests. This process is known as indirect land use change (ILUC); see <http://ec.europa.eu/energy/en/topics/renewable-energy/biofuels/land-use-change>.

[8] See more details on the existing sustainability framework for biofuels and bioliquids in section 5.

[9] COM/2010/0011 final.

[10] Closing the loop – an EU action plan for the circular economy (COM(2015) 614/2).

## 1. General information about respondents

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\* 1.1. In what capacity are you completing this questionnaire?

- academic/research institution
- as an individual / private person
- civil society organisation
-

- international organisation
- other
- private enterprise
- professional organisation
- public authority
- public enterprise

\* 1.6. If you are a civil society organisation, please indicate your main area of focus.

- Agriculture
- Energy
- Environment & Climate
- Other
- Technology & Research

1.8. If replying as an individual/private person, please give your name; otherwise give the name of your organisation

*200 character(s) maximum*

Biofuelwatch

1.9. If your organisation is registered in the Transparency Register, please give your Register ID number.

(If your organisation/institution responds without being registered, the Commission will consider its input as that of an individual and will publish it as such.)

*200 character(s) maximum*

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1.10. Please give your country of residence/establishment

- Austria
- Belgium
- Bulgaria
- Croatia
- Cyprus
- Czech Republic
- Denmark
- Estonia
- Finland
- France
- Germany
- Greece
- Hungary
- Ireland

- Italy
- Latvia
- Lithuania
- Luxembourg
- Malta
- Netherlands
- Poland
- Portugal
- Romania
- Slovakia
- Slovenia
- Spain
- Sweden
- United Kingdom
- Other non-EU European country
- Other non-EU Asian country
- Other non-EU African country
- Other non-EU American country

\* 1.11. Please indicate your preference for the publication of your response on the Commission's website:

(Please note that regardless the option chosen, your contribution may be subject to a request for access to documents under [Regulation 1049/2001](#) on public access to European Parliament, Council and Commission documents. In this case the request will be assessed against the conditions set out in the Regulation and in accordance with applicable [data protection rules](#).)

- Under the name given: I consent to publication of all information in my contribution and I declare that none of it is subject to copyright restrictions that prevent publication.
- Anonymously: I consent to publication of all information in my contribution and I declare that none of it is subject to copyright restrictions that prevent publication.
- Please keep my contribution confidential. (it will not be published, but will be used internally within the Commission)

## Perceptions of bioenergy

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### 2.1. Role of bioenergy in the achievement of EU 2030 climate and energy objectives

Please indicate which of the statements below best corresponds to your perception of the role of bioenergy in the renewable energy mix, in particular in view of the EU's 2030 climate and energy objectives:

- Bioenergy should continue to play a dominant role in the renewable energy mix.
- Bioenergy should continue to play an important role in the renewable energy mix, but the share of other renewable energy sources (such as solar, wind, hydro and geothermal) should increase significantly.
-

Bioenergy should not play an important role in the renewable energy mix: other renewable energy sources should become dominant.

## 2.2. Perception of different types of bioenergy

Please indicate, for each type of bioenergy described below, which statement best corresponds to your perception of the need for public (EU, national, regional) policy intervention (tick one option in each line):

	Should be further promoted	Should be further promoted, but within limits	Should be neither promoted nor discouraged	Should be discouraged	No opinion
Biofuels from food crops	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Biofuels from energy crops (grass, short rotation coppice, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Biofuels from waste (municipal solid waste, wood waste)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Biofuels from agricultural and forest residues	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Biofuels from algae	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Biogas from manure	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Biogas from food crops (e.g. maize)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Biogas from waste, sewage sludge, etc.	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Heat and power from forest					

biomass (except forest residues)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Heat and power from forest residues (tree tops, branches, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Heat and power from agricultural biomass (energy crops, short rotation coppice)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Heat and power from industrial residues (such as sawdust or black liquor)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Heat and power from waste	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Large-scale electricity generation (50 MW or more) from solid biomass	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Commercial heat generation from solid biomass	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Large-scale combined heat and power generation from solid biomass	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Small-scale combined heat and power generation from solid biomass	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Heat generation from biomass in					

domestic (household) installations	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bioenergy based on locally sourced feedstocks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Bioenergy based on feedstocks sourced in the EU	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Bioenergy based on feedstocks imported from non-EU countries	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### 3. Benefits and opportunities from bioenergy

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#### 3.1. Benefits and opportunities from bioenergy

Bioenergy (biofuel for transport, biomass and biogas for heat and power) is currently promoted as it is considered to be contributing to the EU's renewable energy and climate objectives, and also having other potential benefits to the EU economy and society.

Please rate the contribution of bioenergy, as you see it, to the benefits listed below (one answer per line):

	of critical importance	important	neutral	negative	No opinion
Europe's energy security: safe, secure and affordable energy for European citizens	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Grid balancing including through storage of biomass (in an electricity system with a high proportion of electricity from intermittent renewables)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Reduction of GHG emissions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Environmental benefits (including biodiversity)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

Resource efficiency and waste management	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Boosting research and innovation in bio-based industries	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Competitiveness of European industry	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Growth and jobs, including in rural areas	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Sustainable development in developing countries	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### 3.2. Any additional views on the benefits and opportunities from bioenergy? Please explain

*2500 character(s) maximum*

Since the vast majority of Bioenergy does not 'contributing to the EU's renewable energy and climate objectives' and carries very significant risks of making climate change worse and of damage to ecosystems, biodiversity, soil, water, food production, land and human rights and causing dangerous pollution, any other perceived benefits are invalidated. The space allotted to 'risk' herein is barely enough to enumerate them let alone describe them.

Bioenergy from genuine end of life wastes such as manure, sewage, sawdust, industrial effluents has potential benefits. However Anaerobic Digestors in Germany built to take waste now take 90% maize feedstock. Biomass demand has brought new clear-felling to the bottom-land hardwood forests of the southeastern US where at least 70% of the timber including huge whole trees and next generation saplings, is designated as waste by-product or 'zero-carbon forest residue' discounting its value as standing carbon and sequestration engine. The use of 'end of life' waste wood is taking large amount of timber that would previously have been re-used.

Bio-energy should be considered a 'niche' and 'local' resource. Heat and small scale CHP can achieve 80+% efficiencies.

At all times, benefits and opportunities are only credible if a full and genuine analysis of all emissions shows that there is a carbon benefit to be gained over timescales appropriate to renewable energy and climate mitigation policies (i.e. 2050 at the absolute latest). Pollution, especially particulate pollution, should show no increased impacts.

## 4. Risks from bioenergy production and use

### 4.1. Identification of risks

A number of risks have been identified (e.g. by certain scientists, stakeholders and studies) in relation to bioenergy production and use. These may concern specific biomass resources (agriculture, forest, waste), their origin (sourced in the EU or imported) or their end-uses (heat, electricity, transport).

Please rate the relevance of each of these risks as you see it (one answer per line):

	critical	significant	not very significant	non-existent	No opinion
Change in carbon stock due to deforestation and other direct land-use change in the EU	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Change in carbon stock due to deforestation and other direct land-use change in non-EU countries	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Indirect land-use change impacts	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
GHG emissions from the supply chain (e.g. cultivation, processing and transport)	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
GHG emissions from combustion of biomass ('biogenic emissions')	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Impacts on air quality	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Impacts on water and soil	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Impacts on biodiversity	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Varying degrees of efficiency of biomass conversion to energy	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Competition between different uses of biomass					

(energy, food, industrial uses) due to limited availability of land and feedstocks and/or subsidies for specific uses	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Internal market impact of divergent national sustainability schemes	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please specify the "other" choice

*200 character(s) maximum*

ILUC and forest degradation/carbon stock change (without deforestation). Land grabs and human rights conflicts. Wasteful use of limited biomass resources contrary to the idea of circular economy.

4.2. Any additional views on the risks from bioenergy production and use? Please explain

*2500 character(s) maximum*

LAND AND BIODIVERSITY: Bioenergy is hugely inefficient and land intensive. The simple scale (~2/3 of EU 'renewable' energy) and vast potential for growth of large scale bio-energy deemed as a zero or low-carbon alternative to fossil energy risks huge damage to native ecosystems, carbon sinks and biodiversity. EU commitment to the Sustainable Development Goal 7.B to 'reduce biodiversity loss' should preclude bio-energy. The EU is also a party to the CBD which in 2010 adopted the Aichi Targets which require subsidies that result in adverse biodiversity impacts to be halted or reduced.

If we give a green light to the growth of bioenergy we risk a very serious 'train-crash' down the line as the sector grows to try and substitute the fossil fuel based economy. Wise et al. project that bio-energy could displace virtually all wild ecosystems by 2095 if it continues to be supported as a low-carbon and therefore good thing to do. The World Resource Institute showed that to supply 20% of current levels of primary energy for the planet would require a doubling of harvest. That would have catastrophic impacts on native ecosystems, biodiversity, soils and anyway takes no account of the need to increase food production to feed a growing population.

CARBON POSITIVE: There is a large and growing body of studies which show that bio-energy releases more greenhouse gases over decades and even centuries than the fossil fuels they seek to replace. Yet this is not captured in EU renewable energy definitions or carbon accounting methodologies. Bioenergy does not help us meet any climate targets set at Paris or by the EU in any meaningful timeframe.

NEGATIVE SOCIAL IMPACTS are often severe such as land use conflicts, human rights abuses, loss of livelihoods of local communities, food access problems and price rises, dangerous pollution...Bio-energy produces high levels of particulate pollution, routinely underestimated (below PM2.5 there is no safe level according to WHO).

WASTE OF MONEY: Investing in large carbon intensive infrastructure to generate bio-energy continues our dependency on burning (in the case of the UK, Belgium and the Netherlands - big biomass consumers all - mostly imported feedstocks). This subsidy and investment could be used to reduce demand and develop genuine local renewables with no long term feedstock costs, bringing huge long-term cost and emissions reductions as well as energy security, economic, social and well-being benefits.

## 5. Effectiveness of existing EU sustainability scheme for biofuels and bioliquids

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In 2009, the EU established a set of sustainability criteria for biofuels (used in transport) and bioliquids (used for electricity and heating). Only biofuels and bioliquids that comply with the criteria can receive government support or count towards national renewable energy targets. The main criteria are as follows:

- Biofuels produced in new installations must achieve GHG savings of at least 60 % in comparison with fossil fuels. In the case of installations that were in operation before 5 October 2015, biofuels must achieve a GHG emissions saving of at least 35 % until 31 December 2017 and at least 50 % from 1 January 2018. Lifecycle emissions taken into account when calculating GHG savings from biofuels include emissions from cultivation, processing, transport and direct land-use change;
- Biofuels cannot be grown in areas converted from land with previously (before 2008) high carbon stock, such as wetlands or forests;
- Biofuels cannot be produced from raw materials obtained from land with high biodiversity, such as primary forests or highly biodiverse grasslands.

In 2015, new rules[1] came into force that amend the EU legislation on biofuel sustainability (i.e. the Renewable Energy Directive and the Fuel Quality Directive) with a view to reducing the risk of indirect land-use change, preparing the transition to advanced biofuels and supporting renewable electricity in transport. The amendments:

- limit to 7 % the proportion of biofuels from food crops that can be counted towards the 2020 renewable energy targets;
- set an indicative 0.5 % target for advanced biofuels as a reference for national targets to be set by EU countries in 2017;
- maintain the double-counting of advanced biofuels towards the 2020 target of 10 % renewable energy in transport and lay down a harmonised EU list of eligible feedstocks; and
- introduce stronger incentives for the use of renewable electricity in transport (by counting it more towards the 2020 target of 10 % renewable energy use in transport).

[1] Directive (EU) 2015/1513 of the European Parliament and of the Council of 9 September 2015 amending Directive 98/70/EC relating to the quality of petrol and diesel fuels and amending Directive 2009/28/EC on the promotion of the use of energy from renewable sources (OJ L 239, 15.9.2015, p. 1).

### 5.1. Effectiveness in addressing sustainability risks of biofuels and bioliquids

In your view, how effective has the existing EU sustainability scheme for biofuels and bioliquids been in addressing the risks listed below? (one answer per line)

	effective	partly effective	neutral	counter-productive	No opinion
GHG emissions from cultivation, processing and transport	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
GHG emissions from direct land-use change	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Indirect land-use change	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Impacts on biodiversity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Impact on soil, air and water	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

Any additional comments?

*2500 character(s) maximum*

Despite growing evidence of negative impacts of liquid biofuels and the impossibility of adequately assuring sustainable sourcing and preventing indirect impacts, the sustainability regime enabled the EU to justify continuing to increase mandated biofuel additives to road transport fuel. As such the sustainability scheme has been counter-productive across the board.

Biofuels sustainability scheme from 2009 ignored ILUC emissions and therefore did not prevent the deployment of biofuels with potentially higher GHG emissions than fossil fuels they were meant to replace and hence have been counterproductive. It also ignores other indirect impacts.

Revision of the sustainability scheme in 2015 and the 7% cap on food based biofuels is still not effective because a) it does not include ILUC factors, b) it doesn't cover all land based crops, c) it is not extended to the Fuel Quality Directive and d) still allows a growth in food based biofuel use until 2020 as the 7% cap is higher than current consumption levels.

They use creative accounting, such as including 'positive' indirect impacts

while ignoring all negative ones and thus arrive at artificial GHG saving

EU standards lack independent verification/auditing as well as transparency and thus, offer no credible protection from fraud. Enforcement of the sustainability criteria appears to be non-existent. In response to a question from MEP Keith Taylor the EU admitted that it was not aware that any consignment of biofuel had been rejected for not meeting sustainability standards.

Effectiveness of sustainability criteria on biodiversity (Art 17(3)) has been limited by unclear or loose definitions of areas such as primary forests, high biodiversity grasslands etc.

Sustainability criteria impose no human or land rights or food access/price conditions, which would anyway be unenforceable. According to a study by the International Land Coalition, biofuels are shown to be behind 60% of global land deals, and in Africa - which is the most heavily targeted continent for land grabs - that figure rises to 66% totalling millions of hectares. In many cases the biofuels are never grown but the vastly expanding EU market driven by targets and subsidies, (sanctioned by standards) helps provide the excuse and get the investment to enable the land-grabs. There is evidence of violence and even murder in land-grabs for biofuels. Biofuels so sourced would still be classed as 'sustainable' under EU criteria.

## 5.2. Effectiveness in promoting advanced biofuels

In your view, how effective has the sustainability framework for biofuels, including its provisions on indirect land-use change, been in driving the development of 'advanced' biofuels, in particular biofuels produced from ligno-cellulosic material (e.g. grass or straw) or from waste material (e.g. waste vegetable oils)?

- very effective
- effective
- neutral
- counter-productive
- no opinion

What additional measures could be taken to further improve the effectiveness in promoting advanced biofuels?

*2500 character(s) maximum*

Advanced biofuels should not be promoted. They have many of the same impacts of current biofuels and in many cases are based on the same feedstocks. The simple inefficiency of photosynthesis is not improved by putting 'advanced' in front of it. Many of the wastes that will reputedly be used have other, better uses and are in limited supply. Additionally virtually no advanced biofuels have achieved a positive energy balance or commercial scaling, so are likely to remain dependent on subsidy if they are scaled at all.

'Advanced' disguises the fact that in many cases they are dependent upon monocultures with associated risks to biodiversity and other land-uses. Frequently they also depend upon genetic manipulation with unknown risks. Bio-security is no protection against these very high order risks from which in many cases there is no recovery.

Following Renewable Energy Directive implementation the Administrator noted that the volumes of used cooking oil (UCO) derived biofuel being reported as coming from the Netherlands were implausibly high based on the population size. This highlights the difficulty of monitoring the provenance and composition of fuels and the possibility of large scale inaccuracies or distortions.

[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/266390/rtfo-consultation-document.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/266390/rtfo-consultation-document.pdf)

### 5.3. Effectiveness in minimising the administrative burden on operators

In your view, how effective has the EU biofuel sustainability policy been in reducing the administrative burden on operators placing biofuels on the internal market by harmonising sustainability requirements in the Member States (as compared with a situation where these matter would be regulated by national schemes for biofuel sustainability)?

- very effective
- effective
- not effective
- no opinion

What are the lessons to be learned from implementation of the EU sustainability criteria for biofuels? What additional measures could be taken to reduce the administrative burden further?

*2500 character(s) maximum*

### 5.4. Deployment of innovative technologies

In your view, what is needed to facilitate faster development and deployment of innovative technologies in the area of bioenergy? What are the lessons to be learned from the existing support mechanisms for innovative low-carbon technologies relating to bioenergy?

*2500 character(s) maximum*

We believe that the EU should not be facilitating faster development and deployment of bioenergy.

## 6. Effectiveness of existing EU policies in addressing solid and gaseous biomass sustainability issues

6.1. In addition to the non-binding criteria proposed by the Commission in 2010, a number of other EU policies can contribute to the sustainability of solid and gaseous bioenergy in the EU. These include measures in the areas of energy, climate, environment and agriculture.

In your view, how effective are current EU policies in addressing the following risks of negative environmental impacts associated with solid and gaseous biomass used for heat and power? (one answer per line)

	effective	partly effective	neutral	counter-productive	No opinion
Change in carbon stock due to deforestation, forest degradation and other direct land-use change in the EU	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Change in carbon stock due to deforestation, forest degradation and other direct land-use change in non-EU countries	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Indirect land-use change impacts	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
GHG emissions from supply chain, e.g. cultivation, processing and transport	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
GHG emissions from combustion of biomass ('biogenic emissions')	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Air quality	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Water and soil quality	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Biodiversity impacts	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Varying degrees of efficiency of biomass conversion to energy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

Competition between different uses of biomass (energy, food, industrial uses) due to limited availability of land and feedstocks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

Please specify the "other" choice

*200 character(s) maximum*

Social impacts such a land use rights, human rights and food security.

6.2. Any additional views on the effectiveness of existing EU policies on solid and gaseous biomass?

Please explain

*2500 character(s) maximum*

EU policies do not define renewable as the IPCC and IEA do 'replenished at (the same or) a faster rate than they are consumed' but simply lists technologies allowed.

Existing support mechanisms are based on a 'carbon accounting error' (clearly defined by the European Environment Agency Scientific Committee in 2011), which allows bioenergy to be accounted as zero or low carbon. EU bioenergy accounting methodologies which only require reporting of fossil fuel emissions from production and transport of the bioenergy do not measure by far the largest part of the climate impact of bioenergy which is from biogenic emissions which can make the impact routinely worse than coal.

Use of biomass for energy is also driven by the EU ETS that erroneously assumes all bioenergy emissions to be zero without any requirements to prove that emission savings actually take place.

In addition international carbon accounting systems for biomass are deeply flawed. Much of the carbon emissions that should be accounted under the Land sector of the supplier country are missing because the US, Canada and Russia are not signatories to Kyoto and do not account to the UNFCCC. This removes the fundamental basis of much biomass imported to the EU from those countries to be accounted zero-carbon.

Sustainability standards give a false impression that this industry is properly controlled. The UK Biomass Sustainability Standards for instance take no account of the complexity of the huge range of possible sourcing scenarios and their various carbon impacts as represented in the UK Department of Energy and Climate Change's 2014 Biomass Emissions and Counterfactual (BEaC) report and calculator which showed that scenarios since shown to be operational to supply a large part of EU biomass are up to 3 times worse than coal yet are

accounted low carbon and eligible for subsidy.

The Standards are unenforced and unenforceable. The long-term dependence of the industry on subsidy creates a perverse incentive to meet standards at all costs and the self-reporting and auditing process is an invitation to misrepresentation and fraud.

## 7. Policy objectives for a post-2020 bioenergy sustainability policy

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7.1. In your view, what should be the key objectives of an improved EU bioenergy sustainability policy post-2020? Please rank the following objectives in order of importance: most important first; least important 9th/10th (you can rank fewer than 9/10 objectives):

	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
Contribute to climate change objectives	<input checked="" type="radio"/>	<input type="radio"/>								
Avoid environmental impacts (biodiversity, air and water quality)	<input checked="" type="radio"/>	<input type="radio"/>								
Mitigate the impacts of indirect land-use change	<input checked="" type="radio"/>	<input type="radio"/>								
Promote efficient use of the biomass resource, including efficient energy conversion	<input checked="" type="radio"/>	<input type="radio"/>								
Promote free trade and competition in										

the EU among all end-users of the biomass resource	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ensure long-term legal certainty for operators	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Minimise administrative burden for operators	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Promote energy security	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>							
Promote EU industrial competitiveness, growth and jobs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please specify the "other" choice

*200 character(s) maximum*

To define 'renewable energy' as the IEA and IPCC does: 'replenished at (the same or) a faster rate than they are consumed' - to exclude large-scale bio-energy from targets and subsidies.

7.2. Any other views? Please specify

*2500 character(s) maximum*

We do not believe that the first 4 objectives can be prioritised. They are all of equally primal importance. And the only way to meet them under the precautionary principle, given the huge complexity of bioenergy, unenforcability of standards and the severe risks associated with it is to exclude large-scale bioenergy from targets and subsidies - our 'other' choice.

## 8. EU action on sustainability of bioenergy

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8.1. In your view, is there a need for additional EU policy on bioenergy sustainability?

- No: the current policy framework (including the sustainability scheme for biofuels and bioliquids, and other EU and national policies covering solid and gaseous biomass) is sufficient.
- Yes: additional policy is needed for solid and gaseous biomass, but for biofuels and bioliquids the existing scheme is sufficient.
- Yes: additional policy is needed on biofuels and bioliquids, but for solid and gaseous biomass existing EU and national policies are sufficient.
- Yes: a new policy is needed covering all types of bioenergy.

8.2. In your view, and given your answers to the previous questions, what should the EU policy framework on the sustainability of bioenergy include? Please be specific

*5000 character(s) maximum*

EU renewable energy policy should define 'renewable energy' (rather than just list eligible technologies) as the IEA and IPCC does: 'replenished at (the same or) a faster rate than they are consumed' . Large scale bio-energy should not included in targets or be eligible for support or subsidy as it is not renewable or low-carbon in any relevant timescale to meet climate change and biodiversity targets and it carries very serious risks of damaging eco-systems and worsening climate change.

The EU should recognise that sustainability standards are unenforceable. Poor definitions create loopholes which the operators have exploited. The whole bioenergy field is fraught with complexity and infinite variables so that no system of carbon accounting could ever ensure genuine carbon reduction. Under the precautionary principle government subsidy should not be risked on a technology that is already having such dangerously adverse effects.

Certification schemes have long been shown to be flawed and open to fraud. They should not be relied upon. Andre de Freitas, Executive Director of the Forest Stewardship Council (FSC) from 2008-2012 said recently, "The idea that CoC [Chain of Custody] auditing provides much assurance is a myth." PEFC recently certified a supermarket car park and filling station as forest. Biofuelwatch's report 'Sustainable Biomass - a modern myth' documents examples of fraud, certification of bad forestry and human rights practices and shows the impossibility of assuring 'sustainability' in this industry.

The Sustainable Biomass Partnership offers to harmonise EU standards and cover all bases. It is an industry body, chaired by the CEO of Drax power station, the biggest customer for biomass in the world. It accepts FSC and PEFC certification at face value. It should be exposed and discredited.

Some small-scale, local bio-energy may be supportable where genuine wastes are used and real carbon benefits are provable such as anaerobic digestion from manures, genuine agricultural wastes and use of industrial wastes and effluents taking account of the waste hierarchy. But experience shows that this is very difficult to police.

Occasionally high-efficiency local biomass CHP may be allowable if there are local supplies that will not degrade forests. The efficiency minima should be enforced. And rigorous carbon accounting must take into account all possible carbon sources or losses. Centralised electricity generation, even CHP as supported by UK subsidies struggles to exceed 35% efficiency which does not meet EU requirements that efficiency be a high priority (CHP should be 70% efficient).

But the pollution and carbon impacts of scaling up even at a small-scale local level must be rigorously and independently assessed.

## 9. Additional contribution

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Do you have other specific views that could not be expressed in the context of your replies to the above questions?

*5000 character(s) maximum*

No bioenergy is lower carbon at the tail-pipe or the smokestack, per unit of energy delivered, than fossil fuels. Any perceived benefit is dependent on assumed 'regrowth' or that a waste would decompose quickly. It is usually justified by 'forest growth exceeding harvest'. To be truly renewable regrowth must instantly or in a very short time frame re-sequester the carbon emitted by burning tree AND instantly replace the tree's sequestration capacity. In other words it must be ADDITIONAL to what would have happened anyway without the harvest.

Given that the default harvesting practice is clear-felling of large

slow-growing, often hardwood, whole trees from carbon-rich, highly biodiverse forests in the US and Canada it would require an unfeasible and exponential increase in forest area if there were not to be a carbon debt of decades. Monoculture plantations are accounted 'forests' but in biodiversity terms are 'green deserts'.

I have uploaded the executive summary of the Chatham House report chapter on International Carbon Accounting loopholes and the Bioenergy Out declaration signed by 132 civil society organisations from 45 countries.

The upload limit prevents me submitting many useful document so I include them as links:

- + Bioenergy Out: Why bioenergy should not be included in the next EU Renewable Energy Directive, in support of the uploaded declaration.  
<http://www.biofuelwatch.org.uk/wp-content/uploads/EU-Bioenergy-Briefing2.pdf>
- + Biomass Sustainability Standards - a Credible Tool for Avoiding Negative Impacts from Large-scale Bioenergy?  
<http://www.biofuelwatch.org.uk/wp-content/uploads/Biomass-sustainability-standards-handout.pdf>
- + Sustainable Biomass - a modern myth. Report by Biofuelwatch which shows the impossibility of assuring sustainability in this this industry.  
[http://www.biofuelwatch.org.uk/2012/biomass\\_myth\\_report/](http://www.biofuelwatch.org.uk/2012/biomass_myth_report/)
- + Biofuelwatch Report: Biomass: The Chain of Destruction  
<http://www.biofuelwatch.org.uk/2013/chain-of-destruction/>
- + Wood Bioenergy: Green Land Grabs For Dirty 'Renewable' Energy: Report by Global Forest Coalition and Biofuelwatch  
<http://globalforestcoalition.org/wp-content/uploads/2013/10/GFC-wood-bioenergy-update-FINAL-OCT.pdf>
- + Burning Wood in Power Stations - Public Health Impacts  
<http://www.biofuelwatch.org.uk/2014/biomass-aq-briefing/>
- + Failure of UK Biomass Sustainability Standards briefings:  
<http://www.biofuelwatch.org.uk/2016/uk-biomass-standards-briefing/>

Finally, you may upload here any relevant documents, e.g. position papers, that you would like the European Commission to be aware of.

**8a9c7cf0-3e26-4912-9fea-5fa480a980ba/BioenergyOut-Declaration-3.pdf**  
**d409b3cb-a8e7-4d56-b84c-70facbf3e35/Carbon\_summary\_Paris\_final\_\_1\_.pdf**

**Thank you for participation to the consultation!**

## Contact

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