

# 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

\* 1.2. If you are a private or public enterprise, could you please indicate your principal business sector?

- ☐ Agriculture
- ☐ Automotive
- ☐ Biotechnology
- ☐ Chemicals
- ☒ Energy
- ☐ Food
- ☐ Forestry
- ☐ Furniture
- ☐ Mechanical Engineering
- ☐ Other
- ☐ Printing
- ☐ Pulp and Paper
- ☐ Woodworking

\* 1.3. If you are a private or public enterprise, could you please indicate the size of your company?

(Medium-sized enterprise: an enterprise that employs fewer than 250 persons and whose annual turnover does not exceed EUR 50 million or whose annual balance-sheet total does not exceed EUR 43 million.

Small enterprise: an enterprise that employs fewer than 50 persons and whose annual turnover and/or annual balance-sheet total does not exceed EUR 10 million.

Micro-enterprise: an enterprise that employs fewer than 10 persons and whose annual turnover and/or annual balance-sheet total does not exceed EUR 2 million.)

- ☒ large enterprise
- ☐ medium-sized enterprise
- ☐ small enterprise
- ☐ micro-enterprise
- ☐ I don't know

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

*200 character(s) maximum*

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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

### 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 checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Biofuels from energy crops (grass, short rotation coppice, etc.)	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Biofuels from waste (municipal solid waste, wood waste)					
Biofuels from agricultural and forest residues					
Biofuels from algae					
Biogas from manure					
Biogas from food crops (e.g. maize)					
Biogas from waste, sewage sludge, etc.					
Heat and power from forest biomass (except forest residues)					
Heat and power from forest residues (tree tops, branches, etc.)					
Heat and power from agricultural biomass (energy crops, short rotation coppice)					
Heat and power from industrial residues (such as sawdust or black liquor)					
Heat and power from waste					

Large-scale electricity generation (50 MW or more) from solid biomass	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Commercial heat generation from solid biomass	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Large-scale combined heat and power generation from solid biomass	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Small-scale combined heat and power generation from solid biomass	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Heat generation from biomass in domestic (household) installations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Bioenergy based on locally sourced feedstocks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Bioenergy based on feedstocks sourced in the EU	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bioenergy based on feedstocks imported from non-EU countries	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

Please specify the "other" choice

200 character(s) maximum

### 3. Benefits and opportunities from bioenergy

#### 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 checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input 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 type="radio"/>	<input checked="" type="radio"/>
Reduction of GHG emissions	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Environmental benefits (including biodiversity)	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Resource efficiency and waste management	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Boosting research and innovation in bio-based industries	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Competitiveness of European industry	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Growth and jobs, including in rural areas	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sustainable development in developing countries	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



Other	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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Please specify the "other" choice

*200 character(s) maximum*

Energy efficiency;  
Rural diversification;  
Macroeconomic benefits:

- increased tax receipts
- improved terms of trade and balance of payments
- Reduced volatility of oil prices and of inflation

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

*2500 character(s) maximum*

The regulation of sustainability of biofuels and now bioenergy holds a candle to the same issues that must be addressed for all the biobased economy.

Voluntary certificates that vary in their stringency depending on whether the feedstock is for biofuel or for other commercial purposes are double standards, literally.

The EU presently ducks these issues by arguing that other bio-based products are not public goods, so do not deserve the same public scrutiny. But if CO2 emissions and biodiversity are critical issues for public goods then they must also be for free market goods, bearing in mind that they consume the vast majority of biomass. (At least recognized in a limited way in the illegal trade of protected species and of timber)

Therefore this work must be viewed positively, not just in itself, but also as a pilot and a driver of the future regulation necessary for the promotion of the biobased economy.












## 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):

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	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					
Change in carbon stock due to deforestation and other direct land-use change in non-EU countries					
Indirect land-use change impacts					
GHG emissions from the supply chain (e.g. cultivation, processing and transport)					
GHG emissions from combustion of biomass ('biogenic emissions')					
Impacts on air quality					
Impacts on water and soil					
Impacts on biodiversity					
Varying degrees of efficiency of biomass conversion to energy					
Competition between different uses of biomass (energy, food, industrial uses) due to limited availability of land and feedstocks and/or subsidies for specific uses					
Internal market impact of divergent national sustainability schemes					
Other					

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

*2500 character(s) maximum*

One cannot provide a rational generalized reply to question 4.1 because circumstances differ for different forms of bioenergy and the pathways by which they are produced and consumed.

There are a variety of reasons for this:

Liquid biofuels are subject to the most rigorous life-cycle based regulatory sustainability certification scheme in the world, whereas other forms of bioenergy are not.

Conventional biofuels are subject to a cap on consumption in order to control ILUC, whereas other forms of bioenergy are not.

Certain issues have been raised with respect to specific biopathways and assessed but have not been raised for others so their risk is uncertain. For instance, the claim that the EU biofuels policy was driving land grabbing in developing countries was proved to be false. To the best of our knowledge this issue has not been raised with respect to other pathways.

Certain issues have been shown to have a differential impact depending on the pathway.

For instance, the biofuel policy has been shown to have virtually no impact on the price of cereals but a notable impact on the price of vegetable oil, while those biofuels that produce animal feed co-products, lower the cost of animal feed. (No studies consider the impact of biofuels on driving down the price of oil, which is the principle driver of food prices). The corollary to this is that conventional ethanol has a consistently low central estimate of indirect land use change emissions and the models suggest that they may even be ILUC negative, whereas conventional biodiesel pathways have significantly higher modelled ILUC emissions.

## 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 checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
GHG emissions from direct land-use change	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input 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 checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Impact on soil, air and water	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Any additional comments?

*2500 character(s) maximum*

The latest Commission-funded study on ILUC (The Land Use Change Impact of Biofuels Consumed in the EU, Ecofys et al, 2016) shows that central ILUC CO<sub>2</sub> estimates remain too uncertain for the determination of regulatory ILUC factors (both due the range of result in the modeling and also due to the uncertainty over the model assumptions). However, the results provide general patterns that appear reasonably robust. Consequently, the two appropriate policy options are either a cap on production or to restrict the cultivation of high ILUC risk biofuels to lands where there is no resulting risk of high ILUC CO<sub>2</sub> emissions.

If a cap on production were to be continued it would need to be modified to address the following points. The existing cap is limited to all conventional biofuels. Advanced biofuels are excluded. The Study did not assess the ILUC of the two biggest “advanced biofuels” by sales but confirms that some supposedly advanced biofuels have no better ILUC performance than conventional ethanol. So the inclusion of conventional ethanol and exclusion of advanced biofuel from a cap is both discriminatory and counter-productive. The Study also confirms results of previous reports that estimated ILUC emissions from conventional ethanol are low and may even be negative. They do not affect their status as a low carbon fuel. Whereas biodiesel produced from virgin vegetable oil have very high modeled ILUC CO<sub>2</sub> emissions. So a cap on production only seems appropriate for high ILUC risk biofuel.

A mitigation scheme needs to be instituted that incentivises the mitigation of ILUC feedstock to be excluded from the cap. The Study shows that if ILUC of tropical rainforest and drained peatland can be avoided, then ILUC emissions are reduced to a residual 4g CO<sub>2</sub>/MJ. And the Study also reveals how this ILUC of carbon-dense soils can be avoided, in the analysis for the cultivation of energy crops (miscanthus and switchgrass), For they are modeled to be grown principally on abandoned cropland and on a small amount of grassland. The result is negative ILUC emissions. It should then be feasible to convert high ILUC risk crops into low/no ILUC risk crops simply by requiring them to be cropped on this abandoned cropland.

The study goes on to show the huge scale of this abandoned cropland around Europe and also in other parts of the world, so such a policy would not be discriminatory against third countries.

## 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*

The commercialisation of lignocellulosic process technology was one of the key European Council goals for the renewable energy Directive. The multiple counting tool has acted as a barrier to its commercialization, with the perverse consequence that more fossil energy consumed. This policy urgently needs to be abandoned.

The primary support that lignocellulosic ethanol now needs is the market introduction of a higher ethanol blend in petrol, i.e. E20 or E25. This is crucial because the EU petrol market has shrunk to the point whereby during the next decade the conventional ethanol sector in Europe will be fully able to supply an E10 petrol market without imports (in a market where import tariffs have been removed for almost all exporting countries). Without expansion of the market the window for investing in and paying back the investment in lignocellulosic ethanol is fast closing.

Secondly, if lignocellulosic technology is to be effectively promoted it requires long term market access because investors need to be assured of a profit and because the technology requires at least 10 years of full-time operation to pay off its debts. A 2030 binding target would be a welcome milestone but is not, of itself, far enough into the future to assure investors of a return on investment.

Third, the approach towards ILUC must move away from a strict precautionary approach because the new Commission-funded study shows that advanced biofuels can also cause ILUC at the same low level as conventional ethanol. The core message of ILUC modeling studies is that it is reasonable to take a more nuanced approach to ILUC that positively discriminates between low/no ILUC risk biofuels and high ILUC risk biofuels.

Such an assessment must also take into consideration the global marginal emissions of fossil fuels (see further in section 9).

### 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*

Voluntary certification schemes for biofuels in the EU28 have proven to be a successful way to implement sustainable supply chains in the agricultural sector. An extension of these sustainability schemes to the other uses of biomass (food, feed, and energy) is crucial to avoid distortion and to control greenhouse gas emissions from the bio-based sector.

Biodiesel made from supposedly used oil is open to fraud. The European biodiesel industry has taken positive measures to try to reduce this risk from feedstock sourced in Europe, but imports are surging. The EU needs to adopt a management system that specifically controls for this risk and moderates its consumption until fully robust schemes are available as for other feedstock.

#### 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*

See 5.2.

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

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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)

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	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 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 type="radio"/>	<input type="radio"/>
Indirect land-use change impacts	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input 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 type="radio"/>	<input type="radio"/>
GHG emissions from combustion of biomass ('biogenic emissions')	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Air quality	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Water and soil quality	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Biodiversity impacts	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Varying degrees of efficiency of biomass conversion to energy	<input 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	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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



*2500 character(s) maximum*

## 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"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Avoid environmental impacts (biodiversity, air and water quality)	<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"/>
Mitigate the impacts of indirect land-use change	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Promote efficient use of the biomass resource, including efficient energy conversion	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Promote free trade and competition in										

the EU among all end-users of the biomass resource										
Ensure long-term legal certainty for operators										
Minimise administrative burden for operators										
Promote energy security										
Promote EU industrial competitiveness, growth and jobs										
Other										

## 7.2. Any other views? Please specify

*2500 character(s) maximum*

The above ranking may be defined as:

- Of critical importance;
- Of very great importance but where some small flexibility can be envisaged
- Of great importance but not a driving factor
- Of importance in themselves but need to be considered within the context of policy priorities

## 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*

To guarantee the sustainability of all forms of bioenergy and in order to create a level regulatory playing field, the existing sustainability criteria and certification for biofuels and bioliquids should be extended to all forms of bioenergy with the following amendments:

**GHG calculations:** The existing minimum GHG saving thresholds and the GHG calculation methodology should be retained. However, only actual GHG values should be certified in order to create a level playing field amongst all operators. Typical and default GHG values should be repealed.

**ILUC cap and mitigation:** Central ILUC CO<sub>2</sub> estimates remain too uncertain for the determination of regulatory ILUC factors, so the two appropriate policy options are either a cap on production and/or restricting the cultivation of high ILUC risk biofuels to lands where there is no risk of ILUC on carbon dense soils.

If a cap on production were to be continued it would need to be modified to address the following points:

The approach to the cap needs to change in order to positively discriminate

between all biofuels (conventional or otherwise) that have high overall greenhouse gas savings and low/no ILUC risks, with respect to those that have very high ILUC risks. A cap on production should only apply to high ILUC risk biofuel. A mitigation scheme needs to be instituted that incentivises the conversion of high ILUC risk biofuels into low/no ILUC risk biofuels.

Risk minimization: there needs to be a rigorous policy applied globally that minimizes the risk of the fraudulent certification of used oils.

## 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*

The Commission's Staff Working Document to its 2012 legislative proposal on ILUC (SWD(2012) 343 final), makes the following observation:

"In the context of analysing indirect land-use change, a consequential lifecycle analysis is applied for the land resources, which implies that the global net effect is analysed. This is why land-use changes taking place in areas where no biofuel is produced still has an impact on the estimated indirect land-use change emissions of biofuels. Applying the same framework to fossil fuel, it is appropriate to compare overall emissions from biofuels to global marginal emissions from fossil fuels not being extracted as a consequence of using biofuels...

... The global marginal emissions from fossil fuels are expected to be higher than average emissions of fossil fuels used in the EU, the latter being reflected in the fossil fuel comparator (FFC), which in this assessment has been assumed to be 90.3 g/MJ in 2020. As can be seen from figure 4, the overall greenhouse gas emissions balance of the estimated biofuel mix compared to fossil fuels is expected to be positive in 2020, implying that the use of biofuels will save emissions also when the estimated indirect land-use change emissions are taken into account."

The debate over ILUC and its measurement neglects this other major indirect greenhouse gas impact of biofuel.

The significance of this is that it may convert a "high ILUC risk" biofuel into a "low indirect GHG emission" biofuel. (And it should be recalled that the uncertainty over the calculation of global marginal emissions from fossil fuels is significantly less than the uncertainty surrounding modeled estimates of ILUC).

Due consideration of ILUC without equal consideration of global marginal

emissions from fossil fuels can lead to poor policy judgments about the respective environmental merits of biofuel policy as a whole and of individual biofuel pathways.

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

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

## **Contact**

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