

# 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*

Southern Environmental Law Center

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 checked="" type="radio"/>           | <input type="radio"/>            | <input type="radio"/> |
| Biofuels from agricultural and forest residues                   | <input type="radio"/>      | <input type="radio"/>                         | <input checked="" type="radio"/>           | <input type="radio"/>            | <input type="radio"/> |
| Biofuels from algae  | <input type="radio"/>      | <input type="radio"/>                         | <input checked="" type="radio"/>           | <input 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 checked="" type="radio"/> | <input 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 checked="" type="radio"/> | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/> |
| Heat and power from waste   | <input type="radio"/> | <input type="radio"/>            | <input checked="" type="radio"/> | <input 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 checked="" type="radio"/> | <input type="radio"/>            | <input type="radio"/> |
| Large-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"/> |
| Small-scale combined heat and power generation from solid biomass               | <input type="radio"/> | <input checked="" type="radio"/> | <input 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 checked="" type="radio"/> | <input type="radio"/>            | <input type="radio"/> |
| Bioenergy based on feedstocks sourced in the EU              | <input type="radio"/> | <input type="radio"/> | <input checked="" type="radio"/> | <input 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 checked="" 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 checked="" type="radio"/> | <input 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 checked="" type="radio"/> | <input type="radio"/>            | <input type="radio"/> |
| Competitiveness of European industry                     | <input type="radio"/> | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/>            | <input type="radio"/> |
| Growth and jobs, including in rural areas                | <input type="radio"/> | <input type="radio"/> | <input checked="" type="radio"/> | <input 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*

We agree with other groups that bioenergy production with co-benefits should be prioritized when compared to bioenergy used only of energy. Examples of biomass with co-benefits include anaerobic digestion of waste that allows nutrients to return to the soil and the use of biomass harvested for legitimate natural conservation purposes, like grassland management.

## 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 type="radio"/> | <input checked="" 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 type="radio"/>            | <input checked="" 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 type="radio"/>            | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Please specify the "other" choice

*200 character(s) maximum*

Because wood is less energy dense than traditional forms of energy, forest biomass is less efficient, causes higher carbon emissions, and is inconsistent with the concept of the circular economy.

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

*2500 character(s) maximum*

EU policies present a critical risk to forests in the southern US. Specifically, EU policies declaring forest biomass as carbon neutral have caused observed overharvesting of ecologically important forests in the United States. By treating biomass as carbon neutral, EU policies have incentivized European countries to subsidize biomass energy generation. These subsidies have allowed European energy producers to pay higher than normal prices for woody biomass from the southern US, resulting in an unfair competitive advantage over existing forest products users in the region including pulp and paper producers. See the attached documents on the influence of EU biomass policies on US markets. These high prices have caused increased harvesting of all types of forest resources, including ecologically valuable hardwood and wetland forests, in the southern US.

As discussed in the materials attached to this survey, American environmental groups have tracked and observed the harvesting methods used by companies like Enviva to manufacture biomass material for export and use in European power plants. SELC and carbon lifecycle experts have studied the carbon impacts of these harvesting methods and demonstrated that using forest biomass harvested using methods observed in the southern US to generate energy will result in emissions higher than continuing to use coal to generate energy. See attached SIG, "Carbon Emission Estimates for Drax biomass power plants in the UK sourcing from Enviva Pellet Mills in U.S. Southeastern Hardwoods using the BEAC model" (May 27, 2015) and Memorandum from SELC to UK and EU Policy Makers (June 2, 2015). In addition, studies show that these observed harvesting methods have damaged forest biodiversity and habitat value in the southern United States, particularly with regard to native and endangered birds. See the attached documents on biodiversity and wildlife impacts.

These results show that existing EU biomass policies are insufficient and 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 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." See COM(2014) 15.

### 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 checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/>            | <input type="radio"/> |
| GHG emissions from direct land-use change                | <input type="radio"/> | <input checked="" 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 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*

We agree with other groups such as Birdlife International, that EU biofuels policies have historically ignored indirect land use change, and therefore have allowed the deployment of biofuels that will result in potentially higher greenhouse gas emissions over time. Recent EU updates to these policies are still not adequately effective in incorporating indirect land use change emissions because it relies on a 7% cap on food based biofuels which does not include ILUC factors, does not cover all land based crops, is not extended to the Fuel Quality Directive, and still allows a growth in food based biofuel use until 2020 since 7% is higher than current consumption levels. Generally, the verification systems for illustrating compliance with existing sustainability criteria are not sufficiently robust, and therefore criteria may have been partly effective but compliance is difficult to assess. Further, the effectiveness of sustainability criteria has been limited by unclear definitions of areas like primary forests, high biodiversity grasslands, and others.

## 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*

## 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*

## 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)

|  | 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*

EU policies incentivizing the harvest of southern US forests and the manufacture of wood pellets for biomass energy often have negative impacts on the quality of life of rural communities in the US.

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

*2500 character(s) maximum*

Neither EU nor member state policies ensure that using biomass delivers true greenhouse gas reductions. Use of biomass for energy is driven by EU policy that erroneously assumes that greenhouse gas emissions from biomass are zero, and does not require any proof that emission savings actually result from combusting biomass for energy. Based on observed harvesting methods in the southern US of forest biomass exported to Europe, the combustion of forest biomass actually results in greater emissions than continued use of fossil fuels. See, e.g., BEREC, “Biomass Supply and Carbon Accounting for Southeastern Forests” (February, 2012) (attached); Stephenson, A. et al., UK Dept. of Energy and Climate Change, “Life Cycle Impacts of Biomass Electricity in 2020 – Scenarios for Assessing the Greenhouse Gas Impacts and Energy Input Requirements of Using North American Woody Biomass for Electricity Generation in the UK” (2014) (attached). Existing EU policies are therefore ineffective at reducing overall carbon emission.

Certification methods relying on sustainable forest management will not be enough to ensure that biomass is harvested and burned in a carbon beneficial way. For example, existing third-party forestry sustainability certifications do not include any requirements that biomass be harvested in a way that ensures an overall reduction of emissions. Principles of sustainable forest management do not incorporate factors relevant to the carbon intensity of forest biomass, and are therefore inadequate proxies for an effective verification system needed to ensure that the biomass used to generate energy actually reduces overall carbon emissions. Any EU policy that relies on sustainable forest management will not be effective to reduce overall carbon emissions.

Finally, Existing EU policies are ineffective at protecting biodiversity and habitat values. For example, SELC and other groups have observed and documented damage to ecologically important hardwood and wetland forests as a result of harvesting methods used to supply European biomass energy producers. See the attached documents on biodiversity and wildlife impacts. European demand for biomass, caused by EU policies incentivizing the use of biomass as an alleged way to reduce carbon emissions, has resulted in significant damage to biodiversity and habitat value in the southern US. See attached photos of clearcuts of bottomland hardwood wetlands in North Carolina where export pellets were sourced.

## 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 checked="" 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 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 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 type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> |

Please specify the "other" choice

*200 character(s) maximum*

The EU must ensure that its policies do not induce damage to the environment or contribute to global carbon emissions through increased biomass harvesting and land use change in the United States.

7.2. Any other views? Please specify

*2500 character(s) maximum*

The primary goal of EU biomass policy must be to achieve demonstrated reductions in greenhouse gas emissions. Current EU bioenergy policy is fundamentally flawed because it improperly designates all forms of biomass as carbon neutral, allowing the use of forest biomass for energy that increases overall carbon emissions when compared to continued use of fossil fuels. See attached SIG, "Carbon Emission Estimates for Drax biomass powerplants in the UK sourcing from Enviva Pellet Mills in U.S. Southeastern Hardwoods using the BEAC model" (May 27, 2015) and Memorandum from SELC to UK and EU Policy Makers (June 2, 2015). An effective EU Bioenergy policy must acknowledge that not all sources of biomass will reduce carbon emissions when used for energy, and that a rigorous emissions verification and tracking system is necessary to ensure that using biomass actually reduces overall carbon emissions. Reliance on sustainable forest management or other certification methods is not sufficient, since most certification methods do not include any requirements that biomass be harvested in a way that ensures reduction of carbon emissions. Therefore, a key objective of EU bioenergy policy must be to distinguish between the carbon emissions of various biomass sources through the development of an effective and independent emissions verification and tracking system.

Another key objective of EU Bioenergy policy must be to assess and incorporate impacts induced in countries outside of the EU, particularly countries sourcing the biomass used to generate energy in the EU. For example, a substantial portion of the biomass used to generate energy in Europe comes from the forests of the southern United States. See the attached documents on the influence of EU biomass policies on US markets. European demand for imported biomass has resulted in observed and documented damage to forests in the United States, particularly ecologically important wetland and hardwood forests. Harvesting methods induced by European demand for biomass damage biodiversity and habitat values in the United States, while also resulting in biomass that increases overall carbon emissions when compared to continued use of fossil fuels. See attached documents on biodiversity and habitat impacts. A key objective of an effective EU bioenergy policy must be to consider and assess impacts outside of the EU that could undermine the climate and environmental goals of EU bioenergy policy.

## 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 policy framework must include verifiable greenhouse gas savings and correct carbon accounting for biomass. Current EU bioenergy policy is fundamentally flawed because it incorrectly assumes that any use of biomass to create energy is carbon neutral. Using many sources of forest biomass will result in carbon emissions greater than the continued use of fossil fuels. For example, observed and documented methods used to harvest biomass in the southern United States for export to European energy generators results in biomass that will result in greater carbon emissions than continued use of coal. See attached documents on carbon emissions and sourcing. In addition, harvesting methods induced by EU's bioenergy policy have caused documented harms to biodiversity and habitat values in the southern United States, in particular damage to wetland forest habitat essential to endangered birds. See the attached documents on biodiversity and wildlife impacts. An effective EU policy framework on sustainable bioenergy must include verifiable greenhouse gas savings and correct carbon accounting that incorporates harvesting methods in countries outside of the EU used to source European energy generators. The attached studies on carbon emissions provide examples of how the EU can undertake proper carbon accounting for biomass.

We recommend that the EU policy framework for sustainable bioenergy exclude the use of whole trees as biomass for energy. Whole, standing trees provide important climate and ecological benefits. Standing trees contribute to carbon sequestration, provide habitat for wildlife, and contribute to the living ecosystem of forests. Harvesting whole trees for energy purposes causes the greatest damage to biodiversity and habitat values, while also resulting in the greatest overall carbon emissions. See attached documents on harvesting methods and biodiversity and habitat impacts. Furthermore, energy production is heavily subsidized, and authorizing the use of standing trees for energy will distort existing forestry markets and induce more rapid harvesting of managed and unmanaged forests. See the attached documents on the influence of EU biomass policies on US markets. Because the "lumber" quality of the tree is not relevant to energy production, allowing the use of whole trees creates the greatest risk that trees which would otherwise continue to grow and sequester carbon or be used for a commercial purpose like products that lock carbon in place for some time will instead be burned for energy, releasing stored carbon

into the atmosphere in the near term. Whole trees present the greatest risk to the goals of bioenergy policy to reduce emissions and protect biodiversity, and thus should be excluded from the EU policy framework for sustainable bioenergy.

We also recommend that the EU policy framework include its own standards for verifying and tracking carbon emissions from biomass rather than relying on ineffective sustainable forest management and third-party certification systems. Existing third-party forestry sustainability certifications do not include any requirements that biomass be harvested in a way that ensures reduction of carbon emissions. Principles of sustainable forest management do not necessarily incorporate factors relevant to the carbon intensity of forest biomass, and are therefore inadequate proxies for an effective verification system needed to ensure that the biomass used to generate energy actually reduces overall carbon emissions.

## 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*

Specifically, the EU cannot rely on sustainable forest management policies or third-party certification systems because sustainable forest management generally does not include the necessary considerations and requirements to control overall carbon emissions of forest resources used for energy. Likewise, policies for emissions from the land use and forestry sector (LULUCF) such as EU's LULUCF Decision and the Kyoto Protocol have not effectively captured the carbon emissions related to bioenergy use or succeeded in limiting them. Accounting rules and targets for the land sector today are inconsistent globally and allow the hiding of emissions in projected reference levels, particularly with regard to forest management. In order to rely on bioenergy as a way to reduce carbon emissions, EU bioenergy policy must develop its own accounting and verification tools for demonstrating that emissions savings are actually delivered.

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

**93402dc3-21e6-4aee-9b65-ba7bc35125a4/SELC\_Attachments\_List.pdf**

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

## Contact

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