

# 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

\* 1.4. If you are a professional organisation, which sector(s) does your organisation represent?

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

1.5. If you are a professional organisation, where are your member companies located?

- 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
- non-EU country(ies)

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

*200 character(s) maximum*

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*

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 type="radio"/>	<input checked="" type="radio"/>
Biofuels from energy crops (grass, short rotation coppice, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Biofuels from waste (municipal solid waste, wood waste)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Biofuels from agricultural and forest residues	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Biofuels from algae	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Biogas from manure	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Biogas from food crops (e.g. maize)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Biogas from waste, sewage sludge, etc.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Heat and power from forest biomass (except forest residues)	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Heat and power from forest residues (tree tops, branches, etc.)	<input checked="" type="radio"/>	<input type="radio"/>	<input 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 type="radio"/>	<input checked="" type="radio"/>
Heat and power from industrial residues (such as sawdust or black liquor)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Heat and power from waste	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Large-scale electricity generation (50 MW or more) from solid biomass	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Commercial heat generation from solid biomass	<input checked="" type="radio"/>	<input type="radio"/>	<input 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 checked="" type="radio"/>	<input 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 checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Bioenergy based on feedstocks sourced in the EU	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bioenergy based on feedstocks imported from non-EU countries	<input type="radio"/>	<input type="radio"/>	<input checked="" 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*

There should be a level playing field between bioenergy and other renewables. Which renewable energy source dominates should be based on contributions of locally and regionally available energy source

### 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 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 checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reduction of GHG emissions	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Environmental benefits (including biodiversity)	<input type="radio"/>	<input type="radio"/>	<input checked="" 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 checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Competitiveness of European industry	<input type="radio"/>	<input checked="" 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 type="radio"/>	<input checked="" 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*

Forest biomass used for bioenergy is a complementary product that gives a new market and an extra income to the forest owner. This generates additional opportunities for the forest owner to Invest.

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

*2500 character(s) maximum*

The Danish Forest Association sees both great opportunities and benefits in using wood from the forest to renewable energy.

From a sustainability perspective, it would be beneficial for both nature and the environment, if society needs for non-food biomass now and in the future, to the extent possible, is covered by wood biomass from forests. Wood can grow almost anywhere, wood has high growth rates without using the fertilizers and pesticides and forestry is an integrated land use, providing energy, timber, recreational opportunities, better aquatic environment and drinking water in the same area at the same time. In addition, EU forestry has, in dialogue with other forest stakeholders, for decades worked with the definition and execution of sustainable forest management.

Currently, we are experiencing an increased demand for wood for energy. In the future, it is our expectation that we will see an increased demand of (wood) biomass for biomass based products including fuel. A continued rise in demand for energy wood in the coming years will ensure a continued increase in wood biomass production. Wood is not something you can skimp on (not use), to have more in the future. If you expect an increased demand for wood biomass in the future, now is the time to begin the increase wood production, and that is

precisely what increased sales of wood for energy can promote.

About 60 % of the felling in Danish forestry are for energy purposes. The rise in energy wood supply has happened without reductions in timber supplies. The energy market simply fills a marketing hole for low-grade wood that have existed since the last wood stoves was replaced in the 1950s.

## 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 type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Change in carbon stock due to deforestation and other direct land-use change in non-EU countries	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" 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 the supply chain (e.g. cultivation, processing and transport)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
GHG emissions from combustion of biomass ('biogenic emissions')	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Impacts on air quality	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Impacts on water and soil	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Impacts on biodiversity	<input type="radio"/>	<input type="radio"/>	<input checked="" 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 checked="" 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 type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Internal market impact of divergent national sustainability schemes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" 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*

Currently, the debate on bioenergy is creating a very negative image, which is not reflecting the reality. This risks undermining the use of bioenergy and loosing public support.

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

*2500 character(s) maximum*

EU forests supply around 97% of the solid biomass used for energy in EU. This biomass is not associated with deforestation or land use change. The forest biomass is produced as one part of a multifunctional forest management system. There are comprehensive systems in place at national, regional and international level to ensure sustainable forest management, thereby ensuring that the raw material is produced sustainably, irrespective of its end use. There is no sense in creating product-specific sustainability criteria for forest management. Trees are not grown for one single purpose and applying specific sustainability criteria for a single product - considering the wide spectrum of products and functions forestry provides - is simply not feasible. While there is no significant risk for unsustainable biomass production within the EU, there is a very high risk of market disturbances and additional costs by new administrative burdens created by new sustainability requirements from the EU. Many of the concerns raised over bioenergy use in the EU are in relation to imports of biomass from non-EU countries. In this context it is crucial to keep in mind that EU imports only 3% of the solid biomass consumed for energy. Even though this is projected to increase in the future, potentially amounting to 10% by 2020, EU decision makers need to keep in mind that the largest impact of a future bioenergy sustainability policy will be on

the EU actors, including its 16 million private forest owners, who manage 60% of the EU forests. Any additional restrictions, burdens and costs put, directly or indirectly, on the European forest owners would hinder the development of bioenergy at local level. Consequently, this will lead to increased imports from third countries. The EU, with its high management standards in forestry, must focus on securing the domestic wood supply. Another risk is the wish of certain actors to steer the raw material flows on the market, e.g. through cascading use. Competition of the biomass should be seen as something good. A strong demand can stimulate further biomass production and mobilization, as well as innovation and resource efficient use of a valuable resource. Healthy competition for wood will increase wood recycling. Denmark has one wood board manufacturer and the bulk of their raw material is recycled wood.

## 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<sup>[1]</sup> 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 type="radio"/>	<input checked="" type="radio"/>
GHG emissions from direct land-use change	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Indirect land-use change	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Impacts on biodiversity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Impact on soil, air and water	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

Any additional comments?

*2500 character(s) maximum*

The Danish Forest Association has no experience with the criteria's for biofuels and bioliquids.

### 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*

Producing biofuels from forest-based feedstocks offers a great opportunity. The most important factor for this development to take place is that there are long-term, stable and transparent incentives and policy frameworks guaranteeing a market for these products and encouraging investments. The EU should set a separate transport target for renewable fuels for 2030. The framework should also promote investments and commercial development of advanced biofuels. The indicative 0,5% target has not built enough trust for investors. The ILUC debate and decisions have led to major uncertainties on the biofuels sector and decreased development in biofuel production. The separate target on 10% renewables in transport created initiative to invest in the transport sector, but this was clearly hampered with the uncertainty for investors created by the controversial ILUC debate.

### 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*

The sustainability scheme for biofuels was developed for an agricultural feedstock base and would be detrimental if applied for forest biomass. Forest biomass is produced sustainably in the EU, with stringent tools in already in place to ensure this. We cannot have different sustainability schemes for different parts of one tree - a forest is managed holistically for a multitude of different products.

### 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?

A solid and stable regulatory framework beyond 2020 is needed to encourage continued investment in innovative technologies.

## 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 checked="" 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 checked="" 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 supply chain, e.g. cultivation, processing and transport	<input checked="" type="radio"/>	<input 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"/>
Air quality	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Water and soil quality	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Biodiversity impacts	<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 type="radio"/>	<input checked="" 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 checked="" 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*

Forests in the EU are managed according to the principles of Sustainable Forest Management and this is ensured through national and regional forest and other legislation, EU legislation (e.g. Natura 2000, EUTR, LULUCF) as well as Pan-European agreements such as FOREST EUROPE. Furthermore, voluntary certification schemes play an important role in EU, where 55-65% of the forestland is certified under PEFC and/or FSC. These policies form a comprehensive framework that ensures sustainable forest management and thereby ensuring that the raw material is produced sustainably, irrespective of its end use.

The integrative approach of multifunctional sustainable forest management brings economic, environmental and social requirements into balance and is put into practice by forest owners for generations. Biomass is one of many products that emerge from the sustainable forest management, and is in general a by-product.

Member States have stringent frameworks in place to ensure the implementation of SFM in accordance with the FOREST EUROPE criteria, including national forest legislations (none of which is older than 5 years), nature- and other forest-related legislations and additional requirements, such as national forest programs and strategies.

At the EU level, the EU Timber Regulation addresses legality of wood taking into account relevant legislation of the country of origin covering timber harvesting, including national environmental and forest legislation. It therefore addresses sustainability.. LULUCF ensures carbon accounting of biomass. Biodiversity protection is covered by the Birds and Habitat Directives incl Natura 2000 and the EU Biodiversity Strategy.

EU forests supply around 97% of the solid biomass used. Competition of biomass

is not an environmental risk. Allocation of biomass should be decided by the market and should not be regulated.

The new bioenergy sustainability policy requires thorough consideration from EU decision makers. Given the solid systems already in place to ensure sustainability of Europe's forests, a EU policy on bioenergy must ensure that it focuses on the right things. The policy should ensure a supportive framework that encourages SFM and increased mobilisation of forest biomass.

## 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 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"/>	<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 type="radio"/>	<input type="radio"/>	<input checked="" 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 type="radio"/>	<input checked="" 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	<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 checked="" type="radio"/>
Ensure long-term legal certainty for operators	<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"/>	<input type="radio"/>	<input type="radio"/>
Minimise administrative burden for operators	<input type="radio"/>	<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"/>
Promote energy security	<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 EU industrial competitiveness, growth and jobs	<input type="radio"/>	<input type="radio"/>	<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"/>
Other	<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"/>

## 7.2. Any other views? Please specify

*2500 character(s) maximum*

The policy should ensure a supportive framework that encourages sustainable forest management, higher yields and increased mobilisation of forest biomass in the EU. Avoiding environmental impact has been ranked relative low in this reply due to the fact that 97% of our biomass supply comes from Europe with a very low risk of unsustainable forest management.

## 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*

Sustainable forest management is ensured by robust national forest legislation, which was also the conclusion of two reports of the EU Commission in 2010 and 2014 as well as the final report of the ad-hoc working group on SFM criteria and indicators. Further regulations at EU level provide no added value to existing arrangements.

At the EU level, the EU Timber Regulation addresses legality of wood taking into account applicable relevant legislation of the country of origin covering timber harvesting, including national environmental and forest legislation. It therefore addresses sustainability, if sustainability is part of the national legal framework. In Europe and many trade partners, forest related legislation covers sustainable forest management. Thereby, the EUTR ensures the sustainability of the forest biomass used in the EU bioenergy sector.

Furthermore, other EU legislations are also relevant in the context of forest sustainability. Forest carbon accounting is mandatory for all EU countries and covers all emissions related to forest management through LULUCF. The Biodiversity protection framework consists of the Birds and Habitat Directives including Natura 2000 and the EU Biodiversity Strategy (non-binding 2020 headline targets). The EU Water Framework Directive establishes a framework to ensure clean water across Europe and addresses water management.

The bioenergy sustainability framework must not add new legislation concerning forest management. The competence of Member States must be respected and the comprehensive existing systems must be acknowledged and used. The criteria already set in the Renewable Energy Directive for biofuels and bioliquids are developed for agricultural feedstock and cannot be used for forest biomass.

The bioenergy sustainability framework must not add any administrative burdens and costs. Additional burdens and costs would impede the mobilisation of biomass from Europe's 16 million private forest owners. It would obstruct the development of the bioenergy sector, jeopardise green jobs across the whole bioeconomy and jeopardise the objectives of renewable energy and the Paris Agreement.

The bioenergy sustainability framework must acknowledge that bioenergy from sustainably managed forests is carbon neutral. It is important that carbon emissions from biomass use are accounted for. In the EU, all emissions from forest harvesting and carbon stock changes are accounted in the LULUCF sector, which will be integrated in the 2030 climate and energy framework. The accounting of GHG-savings from combustion of bioenergy should therefore not include emissions already accounted for in the LULUCF framework. If biomass is procured from non-LULUCF accounting countries, credible proof has to be given that the harvesting rate in this country does not exceed 100% and the biomass does not come from land conversion. Replacing fossil fuels with renewables gives long-term climate benefits, as the one-way fossil carbon is replaced with carbon that is a part of a natural carbon cycle. EU policy must acknowledge the long-term time frames in forestry and not create sub-optimal solutions based on short-term policy objectives.

The bioenergy sustainability framework must support increased forest biomass mobilisation and growth. To reach the EU 2050 target it is vital to use biomass. Significant unmobilised timber resources in the EU exist and mobilisation of biomass is a critical issue. A new policy needs to stimulate forest owners to actively manage their forests. New supply chains, infrastructure, and logistics also need to be encouraged. The EU should not regulate the allocation of biomass, e.g. through the cascade principle, but must ensure a functioning market with correct price signals to forest producers, ensuring mobilisation of wood for all end-uses.

The bioenergy sustainability framework must only apply to energy operators using bioenergy that receives support or is accountable towards targets, and are above a certain size. The bioenergy sustainability policy should not become a barrier to small-scale bioenergy production, which may to a large extent rely on biomass from small-scale, local biomass producers. Therefore, the policy should apply to energy installations that use forest biomass for heat and power above 20 MW fuel capacity.

The bioenergy sustainability framework must address imports from third countries, as many of the concerns raised over bioenergy use in the EU are in relation to imports of biomass from non-EU countries. However, in this context it is crucial to keep in mind that EU imports only 3% of the solid biomass consumed for energy. Even though this is projected to increase in the future,

potentially amounting to 10% by 2020, EU decision makers need to keep in mind that the largest impact of a future bioenergy sustainability policy will be on the actors operating in the EU.

## 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 sustainability of forest biomass must be considered from a holistic bottom-up perspective, looking at sustainable management of forests irrespective of its end use.

In EU, 60% of the forest area is owned and managed by 16 million private forest owners. For these forest owners, the concept of multifunctional and sustainable forest management is the backbone for their work. Private forestry in Europe has a long history, and it relies on secure forest ownership rights where management is very long-term and requires investments today, with future generations in mind. Forest owners invest considerable resources in Sustainable Forest Management, balancing different objectives and economic, social and environmental aspects.

Some people argue that an increasing demand of forest resources will lead to the depletion of the forests. From a forest owner perspective, this does not make any sense. It is certainly not in the interest of forest owners to deplete the very resource that they own, manage, invest in and benefit from. On the contrary, demand drives activity and investment into forest management, where high-value timber is and will continue to be the main income. This activity and investment benefits Europe in many ways, not the least through jobs and growth in rural areas and enhanced climate mitigation through better growth and more forest products to replace fossils and advance the bioeconomy.

Bioenergy should be seen as an opportunity to further enhance these activities in the forest and the rural area, and as a development that also contributes to the bioeconomy. Discussions on bioenergy in EU are far too negative, and Europe's forest owners regret the black picture that is being painted. It does not reflect the reality and neglects the majority of very positive bioenergy developments.

A EU framework for bioenergy sustainability needs to be based on a cost-efficient approach and maximize synergies with existing policies.

When it comes to addressing sustainability of the forest biomass in the new bioenergy policy, the Danish Forest Association oppose new EU legislation on the sustainable management of forests. The only acceptable approach that could be further investigated is a risk-based assessment on national (or regional

when applicable) level, which builds on existing legislations and systems. Such an approach could potentially deliver a solution that uses existing structures, takes MS competency into consideration, reduces administrative burdens and applies to biomass from both EU and third country imports.

The outcomes of the final report of the ad-hoc working group on SFM criteria and indicators must be acknowledged. The report describes the comprehensive existing national systems to ensure sustainable forest management in EU Member States and acknowledges the work undertaken under FOREST EUROPE during the last two decades as a key platform for SFM.

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**

✉ [SG-D3-BIOENERGY@ec.europa.eu](mailto:SG-D3-BIOENERGY@ec.europa.eu)

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