

A sustainable bioenergy policy for the period after 2020

Fields marked with * are mandatory.

Introduction

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^[10] 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

* 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

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

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 checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Biofuels from agricultural and forest residues	<input type="radio"/>	<input checked="" 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 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 checked="" 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 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 type="radio"/>	<input checked="" 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 checked="" type="radio"/>	<input 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

Bioenergy based on separated bio-based waste could be promoted to a limited extent but not as part of energy generation from mixed waste.

3. Benefits and opportunities from bioenergy

3.1. Benefits and opportunities from bioenergy

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

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

	of critical importance	important	neutral	negative	No opinion
Europe's energy security: safe, secure and affordable energy for European citizens	<input 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 checked="" type="radio"/>	<input type="radio"/>

Please specify the "other" choice

200 character(s) maximum

Small-scale bioenergy projects aimed at meeting local energy demand with beneficial impacts for rural communities in terms of investment in agriculture and access to sustainable energy.

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

2500 character(s) maximum

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 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

Impacts on food security and the right to food globally through i.a. impacts on prices of agricultural commodities, land and water use, land rights and ecosystem services.

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

2500 character(s) maximum

“When crops are used for biofuels, the first direct impact is to reduce food and feed availability. This induces an increase in prices and a reduction of food demand by the poor.” (UN Committee on World Food Security – High Level Panel of Experts, Biofuels and Food Security, June 2013) Research has also shown that EU biofuel policy relies on reduced food consumption to secure emission savings. In the case of ethanol, models assume 20% to 50% of the net calories diverted to make ethanol are not replaced. Resulting increases in global food prices affect the world’s poorest disproportionately. The reduction in their food consumption can be measured both in terms of quantity and overall food quality due to the replacement of oils and vegetables by corn and wheat, which are of lesser nutritional value. (Searchinger et al., Do biofuel policies seek to cut emissions by cutting food?, Science, March 2015).

There is a clear link between the current EU bioenergy policy and the strong interest of European companies to acquire agricultural land outside Europe. Research carried out by the International Land Coalition’s Land Matrix project shows that biofuel production is the second most important driver of large-scale land acquisitions, which are threatening the livelihoods and food security of local communities in developing countries. Land concentration happens to the detriment of smallholder farmers, compromising their access to land and water. Moreover, large-scale projects are often accompanied by violations of land rights as well as human and labour rights.

Increasing the share of solid biomass in the EU’s bioenergy mix after 2020 beyond what can be sustainably produced in Europe will also threaten food security globally because it will incentivise deforestation and industrial afforestation projects. Forests play an important role in securing the livelihoods of over one billion of the poorest people on the planet by providing food or cash income through a wide range of ecosystem services. Industrial afforestation competes with food production for arable land.

Incentivising massive production of biomass for export to the EU contributes

to a detrimental model of large-scale agriculture relying on monocropping and intensive use of fertilisers. This outdated model makes local communities less resilient to climate change and more food-insecure, by displacing food production that is already under threat from climate change impacts.

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

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

Biofuels and bioliquids sustainability criteria included in the RED and FQD have proven ineffective in ensuring the sustainability of biofuels and bioliquids for the following reasons:

- direct environmental impacts are only partially addressed; significant risks are ignored, in particular threats to water and soil quality,
- social sustainability is ignored; no binding criteria address the following risks: violations of land and water rights, impacts on food production and food prices, violations of human and labour rights,
- leakage effects due to ILUC make RED/FQD sustainability criteria ineffective in ensuring GHG mitigation and preventing loss of highly biodiverse and high carbon stock areas,
- the effectiveness of the numerous voluntary certification schemes recognised by the Commission is not adequately monitored.

The effectiveness of the 7% limit on biofuels made from food crops and energy crops in addressing emissions from ILUC and other indirect impacts will be limited for the following reasons:

- the 7% limit is too high, allowing for continued growth in demand for biofuels with very high indirect impact,
- the 7% limit will only apply across the EU to RED, its application to FQD is optional for Member States,
- Member States are allowed to provide state aid to biofuels made from food crops and energy crops even if they exceed the 7% limit.

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

Phasing out biofuels made from food crops and dedicated energy crops is the most effective way to incentivise truly advanced and sustainable biofuels. The 7% limit on the share of land-based biofuels introduced in 2015 should be progressively lowered to phase out these biofuels. It is also essential that no incorporation obligation for these biofuels or other measures with similar effects is introduced after 2020.

Advanced, non land-based biofuels could play a role in the phase out of land-based biofuels but other measures to decarbonize the transport sector (e.g. efficiency and electrification) should be prioritized. There should be no volume / percentage target for advanced (or any other) biofuels as this approach only focuses on quantity and not on quality and impacts of those biofuels.

There should be a level playing field for all forms of bioenergy, including advanced biofuels, which would apply the same sustainability requirements for all bioenergy and provide a consistent and more secure policy framework for investments.

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

Targets, mandates and incorporation obligations for higher volumes of biofuel or bioenergy put quantity above quality. They do not encourage more efficient, innovative or environmentally beneficial forms bioenergy.

Policy needs to give a clear preference for the kinds of bioenergy (biomass source, conversion technologies etc.) that deliver societal and environmental benefits and exclude bioenergy with negative impacts, so that development of more innovative uses and forms of bioenergy is incentivised. For example, stringent requirements for higher conversion efficiency can incentivise technological innovation.

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

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

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

	effective	partly effective	neutral	counter-productive	No opinion
Change in carbon stock due to deforestation, forest degradation and other direct land-use change in the EU	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

Change in carbon stock due to deforestation, forest degradation and other direct land-use change in non-EU countries	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Indirect land-use change impacts	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
GHG emissions from supply chain, e.g. cultivation, processing and transport	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
GHG emissions from combustion of biomass ('biogenic emissions')	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Air quality	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Water and soil quality	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Biodiversity impacts	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Varying degrees of efficiency of biomass conversion to energy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Competition between different uses of biomass (energy, food, industrial uses) due to limited availability of land and feedstocks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

Please specify the "other" choice

200 character(s) maximum

Impacts on people that depend on forest resources for their livelihoods (close to 1.6 billion people globally, source: FAO); impacts on the rights of indigenous communities

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

Please explain

2500 character(s) maximum

No limit has been introduced on the share of the EU's renewable energy that can come from solid or gaseous biomass. In the absence of such a limit set at the level of what the EU can sustainably supply itself, the increase in the EU's consumption of biomass carries the risk of incentivising industrial afforestation (tree plantations) and deforestation (logging) outside the EU, in particular in countries with important land and forest resources and weak sustainability safeguards. Both afforestation and deforestation involve important risks for the environment (reduced biodiversity), the climate (reduced carbon stocks) and for the rights and livelihoods of people dependant on land and forests. Afforestation may compete with food production and land use rights of local communities in developing countries. Deforestation, sometimes accompanied by industrial reforestation, can take place at the expense of highly biodiverse and carbon-rich natural forests and threaten the livelihoods and food security of forest-dependent communities.

The Commission's 2010 recommendations to Member States on the sustainability criteria for solid and gaseous biomass is meant to ensure criteria are identical to the RED criteria for biofuels and bioliquids with the exception of the GHG performance criteria for wastes. The shortcomings of the Commission's approach are therefore similar:

- direct environmental impacts are only partially adressed; significant risks are ignored, in particular threats to air, water and soil quality,
- social sustainability is ignored; no binding criteria adress the following risks: violations of rights of local and indigenou communities to land, water and forest resources, impacts on food security, violations of human and labour rights,
- leakage effects due to ILUC make sustainibility criteria ineffective in ensuring GHG mitigation and preventing loss of highly biodiverse and high carbon stock areas,
- the effectiveness of the national sustainability schemes for solid and gaseous biomass is not adequately monitored.

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

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

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

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

Please specify the "other" choice

200 character(s) maximum

7.2. Any other views? Please specify

2500 character(s) maximum

Policy Coherence for Sustainable Development: ensure the EU bioenergy policy does not undermine its development objectives, particularly in relation to food security (Art. 208 Lisbon Treaty, SDGs)

8. EU action on sustainability of bioenergy

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

The EU bioenergy sustainability policy should be based on the following five principles:

- 1- phase out the use of land using bioenergy made from food crops and dedicated energy crops,
- 2- introduce a cap to limit the use of biomass for energy production to levels that can be supplied in a socially and environmentally sustainable way considering limited land and water availability and environmental costs of deforestation;
- 3- ensure efficient and optimal use of biomass resources, in line with the principle of cascading use;
- 4- correct carbon accounting for biomass, including life-cycle emissions, smoke-stack emissions and indirect land-use change;
- 5- introduce comprehensive binding social and environmental sustainability criteria.

To send a clear signal to industry, no new volume target should be set for renewable energy in transport after 2020 and all incentives for land-based biofuels (made from food crops, energy crops or dedicated plants and trees)

should be ended. Building on the 7% cap on land-based biofuel that can be used in transport that was introduced in 2015, the amount of these biofuels that can be put on the EU market should be further reduced after 2020 with the aim of phasing out these fuels. The same measure should be applied to biogas made from the same feedstocks.

An EU-wide cap on bioenergy that can be counted towards the EU-wide renewable energy target and publicly incentivised should be introduced and implemented in a coherent way with the EU's renewable energy target. The cap should be expressed in the amount of energy content of the bioenergy rather than in percentages of energy consumption which is sensitive to the level of overall energy demand. Earlier research indicates that a cap should correspond to the projected level of biomass use for energy in 2020 which has been estimated to still be within the limits of what Europe can sustainably supply.

An assessment of other uses of the targeted biomass resources must be provided together with evidence that there is no significant displacement of existing non-energy uses of the biomass and that the use of biomass is in line with the cascading use principle. Cascading use is a strategy to use raw materials such as biomass, in chronologically sequential steps as long, often and efficiently as possible for materials and only to recover energy at the end of the product life cycle. Public incentives for use of organic waste as energy can be applied only when a Member State has implemented the targets and hierarchy of the Waste Framework Directive. Only bioenergy produced in the most energy efficient installations will be counted towards the renewables targets.

Correct carbon accounting of all forms of bioenergy is essential. The full carbon footprint must be taken into account to determine whether GHG emission savings thresholds have been met. This includes: life-cycle emissions from the production, transport and processing feedstocks; biogenic emissions released when burning biofuels, bioliquids, biogas and solid mass; emissions from indirect land use change. Correct carbon accounting of bioenergy throughout the EU climate and energy package, applying to both traded sectors (ETS) and non-traded sectors (ESD).

Support must be targeted towards bioenergy made from waste and residues and subject to the following binding environmental and social sustainability safeguards:

- the free prior and informed consent (FPIC) of all communities affected by land deals to produce bioenergy must be secured,
- bioenergy producers must demonstrate that they are not operating on contested land,
- bioenergy producers must be able to provide evidence that their operations comply with Applicable Laws and Regulations in the country concerned,
- bioenergy producers must provide evidence that there is no negative impact on the food security of local communities in the areas where they source their feedstocks,
- bioenergy producers must demonstrate that they have exerted due diligence to avoid violations of human and labour rights throughout their supply chains.

- no biomass from land with high biodiversity value and high carbon stocks as defined in the Renewable Energy Directive Article 17 (3-5),
- no biomass from areas designated for nature protection is used unless harvested strictly in line with the management plan of the area and contributes to its objectives,
- no use of stumps or stemwood unless harvesting is for nature conservation purposes,
- limitations to extraction of agricultural and forest harvesting residues,
- limitations on the use of hazardous chemicals,
- provide robust evidence that there has been no displacement of material uses of biomass through energy use,
- only permit the use of separated biogenic waste for renewable energy, and ensure use for energy is compliant with the waste hierarchy,
- no growing of invasive species,
- enact minimum efficiency requirements for bioenergy installations.

9. Additional contribution

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 requirements of bioenergy must apply to all sectors of the EU climate and energy policy (ETS, ESD, RED, FQD) and to State Aid Guidelines.

Emissions from land use, land use change and forestry sector (LULUCF) are not adequately accounted for because inconsistent and ineffective accounting rules globally allow for the concealment of emissions in projected reference levels (especially forest management). Carbon emissions need to be minimized by applying sustainability requirements to the policies driving bioenergy use i.e. the renewable energy policies. As operators in the energy sector benefit from support schemes for renewable energy, they should also be responsible for ensuring emissions savings are actually delivered.

Existing EU and global policies on sustainable forest management and agriculture are not adequate to ensure that bioenergy is environmentally and socially sustainable and sound from a climate change mitigation perspective. A sustainability framework that is tailored to address the specific risks of bioenergy is essential to ensure genuine greenhouse gas savings and prevent environmental and social damage.

Information to consumers is essential to enable them to choose the most sustainable energy sources. Particularly where energy is marketed as 'green' or 'renewable' information must be available e.g. on whether the energy has been produced by burning feedstock or not and the origin of such feedstock. Information on greenhouse gas emissions should be part of this information for consumers as climate benefits are one of the main selling points of renewable energy. Such information on emissions must take into account the full life cycle analysis and changes to carbon stocks, forgone sequestration and ILUC.

As competition for natural resources is on the rise and increasingly generates conflicts, the EU should seek to reduce its land and water footprint outside Europe, rather than increasing it, since land and water are indispensable ingredients of food security. The EU bioenergy policy should not incentivise large-scale industrial schemes and tree monoculture plantations. These involve large-scale land acquisitions in developing countries, displace food production, exacerbate food insecurity, drive economic inequalities in rural areas, destroy rural livelihoods and displace or disempower local communities.

The EU should make sure that its future energy policy will not hamper the transition towards Climate Resilient Sustainable Agriculture (CRSA) in Europe and in developing countries. CRSA is based on agroecology and participation of local communities, with a focus on women. In comparison to industrial agriculture, agroecological practices have a lower climate change impact, and builds the resilience of local communities to climate change, which is key to ensuring their food security.

Large-scale land transactions do generally not involve genuine consultation of local communities in respect of Free, Prior and Informed Consent (FPIC) - which includes the possibility for affected people to refuse a project that would not meet their aspirations or that would not benefit them. In countries with weak land governance and limited space for civil society participation, the risk of large-scale land deals turning into land grabs is even more acute.

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

Pitfalls and potentials: the role of bioenergy in the EU climate and energy policy post 2020

<https://www.oxfam.org/en/research/pitfalls-and-potentials-role-bioenergy-eu-climate-and-energy-policy-post-2020>

Hunger grains The fight is on. Time to scrap EU biofuels mandates.

<https://www.oxfam.org/en/research/hunger-grains>

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

Thank you for participation to the consultation!

Contact

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