

The Legal Design of Sustainability Criteria on Biofuels Used by the European Union

Ellen Margrethe Basse

Biofuels are more environmentally friendly than fossil fuels but not necessarily sustainable. This article describes the legal power of the European Union (EU)—and the use of this power—to promote the sustainable use of the biofuels by formally binding criteria. The sustainability criteria laid down in the Renewable Energy Directive (RED) is analyzed, and explained is how it differentiates among biofuels on the basis of their environmental sustainability related to their processes and production methods. The use of these criteria has the *twofold goal* of making it possible to *reduce greenhouse gas emissions* caused by the use of fuels and to *prevent the conversion of land* characterized by high-carbon stock and high biodiversity for biofuel production. The EU rules do not prohibit trade of nonsustainable biofuels. The RED and the Fuel Quality Directive prohibit member states from counting nonsustainable biofuels as part of the fulfillment of their renewable energy obligations, and the European Community guidelines on environmental support are depriving the suppliers of nonsustainable biofuels from getting economic support. These EU rules may effectively eliminate the interest of the business in placing nonsustainable biofuels on the EU market. Thus, the EU exerts extraterritorial jurisdiction by the way of the sustainability criteria. Only those sustainability criteria related to agroenvironmental practices are without effect on biofuel production outside the EU. The possible incompatibility of the EU rules and sustainability criteria with the World Trade Organization rules is discussed briefly. Mentioned are other examples of

extraterritorial EU environmental criteria/schemes and several indications on the acceptance of such transnational protection of the environment.

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The European Union (EU) is actually pushing the agenda on climate, biodiversity, renewable energy, and bioeconomy in international negotiations and, as part of this strategy, is focusing on the development of bioenergy (including biofuels).¹ To try to assure a global environmental benefit from use of biofuels, the EU has developed total harmonized and binding *quality* criteria—titled *sustainability criteria*—focusing on the whole life cycle² of biofuels, including the production process, land use change, and transport of biofuels that take place inside and outside EU territory.

This article focuses on the aforementioned sustainability criteria established by Directive 2009/28/EC on the promotion of renewable energy—that is, the Renewable Energy Directive (RED) (European Parliament and Council, 2009a)—as an example of the impact of globalization on the legal design (Edgeworth, 2003, pp. 126–128, 177). The high level of vertical uniformity of procedural norms, methodological criteria, indicators and standards in international environmental law and domestic environmental law in the EU member states is a consequence of the power that the EU has to act on behalf of its member states in international environmental regimes.

The RED is applicable to all energy issues even when it overlaps with other areas of regulation,³ and it covers all nonfossil sources in the form of wind, solar, aerothermal energy, geothermal energy, hydrothermal energy and ocean energy, hydropower, biomass, landfill gas, sewage plants, biofuels/bioliquids, and biogas. The design of the criteria will be explained as an example on the “Europeanization” of

Affiliation of author: Ellen Margrethe Basse, Department of Law, School of Business and Social Science, Aarhus University, Aarhus, Denmark.

Address correspondence to: Ellen Margrethe Basse, Department of Law, School of Business and Social Science, Aarhus University, Aarhus, Denmark; (phone) +45-87165425; (e-mail) em@basse.dk.

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the content of international law, wherein international law is transformed into national law in the member states (Wouters, Nollkaemper, and De Wet, 2008a,b). The international law of special importance in respect to the EU's promotion of biofuels as renewable energy sources (RES) is the United Nations Framework Convention on Climate Change (UNFCCC) [UN Environment Programme (UNEP), 1992a],⁴ along with the Kyoto Protocol agreed at the COP7 (2005) under the UNFCCC, and the UN Convention on Biological Diversity (CBD) (UNEP, 1992b).⁵ The EU and its member states are all party to these international agreements. Several other international agreements are included in the EU's global approach to the sustainable production of biofuels described later in this article. The global approach in the EU's biofuel legislation is a consequence of the high political priority afforded a global approach to bioenergy initiatives. The new EU bioeconomic strategy (February 2012)⁶ focuses also on policy coherence, cross-sectoral interaction, and international cooperation for a global bioeconomy (European Commission, 2012b, pp. 16–27, 40–41, 46). This regulatory approach is different from the American “National Bioeconomy Blueprint” (April 2012), which focuses on the reduction of national barriers (White House, 2012, pp. 29–33).

Regarding the development of environmental law, it can be stated that it has been EU that has pioneered new refinements in this law, especially in the use of a holistic regulatory approach in the legal design over the last 20 years. The Water Framework Directive (2000/60/EC) was the first example on this new regulatory design (European Parliament and Council, 2000). From the 1920s and particular in 1970–90, it was the United States (US), along with Canada and Australia, that provided innovative legal concepts and reforms in environmental law—but the EU is now the front-runner (Robinson, 2012, p. 12).⁷ The EU environmental law harmonizes conduct across national borders and across sectors, making it possible to ensure a harmonized, holistic approach in the implementation of the international obligations—involving also coregulation⁸ and extraterritorial effects. The regulatory design used by the EU is a consequence of the sustainability approach clearly stated as an overall political priority in the Treaty on European Union,⁹ as amended by the Treaty of Lisbon (2007).¹⁰

The Lisbon Treaty and the European Power

Sustainability is a goal that the EU is set to achieve in accordance with Treaty on European Union (TEU, 2008) Article 3 (all regulation policies), Treaty on the Functioning of the European Union (TFEU, 2008) Article 11 (principle

of integration regulating all policies), TFEU Articles 191–193 (regulating the environmental, climate, and energy policies), and TFEU Article 194 (regulating the energy policy). Based on the principle of integration, environmental protection requirements must be treated as an integral part of the planning and implementation of all development activities and policies of the EU, in particular with a view to promoting sustainable development.

The total harmonization of the sustainability criteria on biofuels and bioliquids (hereafter referred to collectively in the text as biofuels) in EU territory is ensured by use of the TFEU's rule on the Single Market (now TFEU Article 114)¹¹ as the legal basis for RED Articles 17–19. The intention of the Single Market (also known as the Internal Market) is to ensure the same competition situation for all enterprises in the EU—avoiding EU internal trade distortions caused by incompatible national requirements; their office registered in one member state must not affect the trading conditions in the other member states. Harmonization is said to be total when a directive is intended to provide for a more or less uniform European standard from which it is no longer possible to deviate at the national level.¹² The use of the aforementioned TFEU's rule as the legal basis ensures the prioritizing of the economic interests in a total harmonization of the market conditions for biofuel production, ensuring a level playing field by avoiding excessive overlapping of different rules for the same biomass material used in the production. The environmental rule in the treaty (now TFEU Article 192) is the legal basis for all of the other rules laid down in the RED. TFEU Article 193 expressly permits the member states to take more stringent national environmental measures in the areas of the RED regulated on an environmental legal basis,¹³ as long as they respect the requirements of the treaty. The vertical harmonization of RED rules between the EU's requirements and the requirements at the domestic level is therefore strongest with respect to the sustainability criteria.

Within the areas of RES (combining environment, climate, and energy issues), the TFEU contemplates in Article 4(1) powers shared among the member states and the EU institutions. A shared power implies that both the EU and its member states may legislate and adopt legally binding rules. The EU institutions must satisfy two tests when they are regulating. *Firstly*, they must demonstrate that the objectives of the initiatives cannot be achieved sufficiently at the domestic level, and *secondly* they should demonstrate that the actual initiative by reason of its scale or its effects can be better achieved—for example, be more effective, more democratic, more consistent with the Single Market, more

consistent with international obligations, and more environmentally friendly—at the EU level than at the domestic level. On the other hand, the member states shall exercise their competence only to the extent that the EU has not exercised, or has decided on not exercising, its power.

The environmental principles of integration, precaution, and the polluter pays are assumed by the TFEU and RED to be legally guiding principles for the EU institutions and the member states when they develop their RES legislation.

TFEU Article 191(4) declares that member states and the EU shall cooperate with non-member states within their respective spheres of legal power. As common commercial policies are an area of *exclusive* EU power pursuant to TFEU Article 3(1), it is the EU that has the power to make agreements with non-member states on behalf of all member states in areas related to commercial issues.¹⁴ It is the European Commission (hereafter referred to in the text as the Commission) that negotiates and the European Council (hereafter referred to in the text as the Council) that makes the final decision on international commercial commitments with binding effects for the member states unless secondary legislation accepts that the Commission has the competence to make the final decision. The EU has the competence in accordance with RED Article 18(4). Based on the rulings of the European Court of Justice (ECJ)—now the Court of Justice of the European Union (CJEU)—the member states are under an obligation to ensure, if necessary by a separate provision, that EU requirements take precedence in conflicts between domestic law and the EU rules transforming international obligations into EU requirements. These CJEU rulings ensure the Europeanization of international law, as the CJEU’s legal authority is like that of a supreme court enforcing a federal constitution (Edgeworth, 2003, p. 179).

Flexibility and Mandatory Conditions

The EU has set itself the target that at least 20% of the total energy used in 2020 will be based on RES; cf. RED Article 3, which sets individual, binding targets for all member states in order to achieve this overall target.¹⁵ At least 10% of propellants in transport in every member state must be RES. With regard to the result to be achieved, the requirements in the directive are binding upon each member state, though it is to some extent left to the national authorities to choose form, methods, and instruments to be used (TFEU Article 288). The EU can only decide measures significantly affecting a member state’s choice between different energy

sources if all members of the Council accept the requirements. The RED does therefore not decide the mandatory use of biofuels, but, as biofuels are the most important alternatives to oil and gasoline to be used, several national initiatives have been taken to promote their use.

Flexibility in the Use of Mechanisms

The RED includes a range of remedies that member states may take in applying the directive’s conditions, including the following:

- Market-based instruments (such as guarantees of origin,¹⁶ tradable green certificates, and environmental subsidies to green technologies) that are flexible, cost-effective tools.
- Fiscal instruments (e.g., ecotaxes, charges, and feed-in tariffs) that shift the tax burden from labor to environmental impact and energy.
- Command-and-control mechanisms (e.g., mandatory use of RES).
- Mechanisms that restructure traditional command-and-control rules (e.g., by replacing them with biofuel and bioliquid sustainability schemes).

The cooperative mechanisms set up in RED Articles 6–11 are examples of the flexibility accepted by the TFEU and by the RED, allowing different degrees of commitment between member states to coexist within the EU framework. As part of fulfilling their performance, the member states are allowed to use statistical transfers of a specified amount of RES across national borders, and they can use cross-border schemes. The RED accepts all types of joint projects between member states in RES production and use. The cooperation may include private operators. Transfer of RES between one or more non-member states is also accepted. The rules are concrete efforts to reduce the barriers that national state jurisdiction based on international law may present. The objectives of these new mechanisms are to motivate the use of a European regulatory perspective, to promote the integration of renewable energy into the Single Market through trade, and at the same time to ensure some respect for the principle of member state sovereignty.

The autonomy left to the member states can be viewed in light of the EU institutions’ limited capabilities under TFEU Articles 191–194 and the general principles of subsidiarity and proportionality (cf. TEU Article 5). The principles mentioned must be respected by EU institutions in the use of shared competences.

Another reason behind the RED design is that the initiatives to be taken are not in the hands of only the member states, but also initiatives by business and other private actors. The RED therefore involves coregulation, for example, by accepting voluntary schemes.¹⁷

Mandatory Conditions for Sustainability Schemes

The sustainability criteria described in the RED must be respected by the member states for the following purposes:

- Counting of the RES targets under the RED (related to final energy consumption).¹⁸
- Complying with the quantitative obligations laid down in the RED and RES obligations laid down in the Fuel Quality Directive (European Parliament and Council, 1998, 2009b) and in the Regulation on Performance Standards for New Passenger Cars and Light Commercial Vehicles (European Parliament and Council, 2009c).¹⁹
- Receiving financial support for their consumption respecting the Community Guidelines for on State Aid for Environmental Protection (European Commission, 2008b).²⁰

Where biofuels are to be taken into account by member states for these purposes, the member states shall require the economic operators to show that the subsidiarity criteria have been fulfilled. RED Article 17(8) states that member states must offer access to their market and support schemes for biofuels that meet the sustainability criteria.

The Environmental Reasoning behind the Introduction of Sustainability Criteria

The use of biofuels has some negative impact in respect to climate change, biodiversity, and hunger.²¹ As negative environmental and human impacts of biofuels have come to light, and as the low-carbon benefits of some biofuels have been questioned, the need for well-designed criteria has been introduced into the political agenda. The reasoning behind the EU biofuel strategy is the need for initiatives that can ensure a reduction of greenhouse gas (GHG) emissions from transport, as well as the potential negative impact from biomass production on biodiversity and soil, and over the growing of biomass in vulnerable environmental areas (European Commission, 2008a). Typically, biofuels have a production chain with many links, from the field to the fuel distribution. Some studies claim that biofuel production would significantly increase GHG emissions from the soil in nations where direct land use change and indirect land use change (ILUC) have caused a large-

scale expansion of feedstock production (Wold, Hunter, and Powers, 2009, pp. 753–761). The most common agricultural sources of biofuel used in the EU are ethanol (i.e., produced from corn or sugar) and biodiesel (i.e., separated from vegetable oil or animal fat). The biofuels are often imported from developing nations, where the environmental legislation on deforestation etc. can be weak compared to EU standards. Several member states have also, until the RED came into force on June 25, 2009, largely fueled development of the biofuel industry through mandates, targets, and various mechanisms of support (i.e., tax concessions, feed-in tariffs, grants, and annual payments for biomass) without considering all of the negative consequences of the promotion (UNEP, 2011, p. 20).

General Sustainability Criteria

The sustainability criteria established by the RED mandate the total harmonized legal framework in all member states. If the member states want to use their biofuel to fulfill their RES obligations, the GHG-emission savings from biofuels used in 2009–16 should be at least 35%, which includes the calculation of the full carbon effects of land conversion to the growth of biomass (cf. RED Article 17). The GHG savings after January 1, 2017, should be at least 50% and from January 1, 2018, at least 60%. Based on the criteria, raw materials (biomass) for biofuel and bioliquid cannot be produced on land with high-carbon stock or on wetlands, forests, and areas with other wooded land of native species. The RED restricts production of raw materials for biofuel on land that has a high biodiversity status or high carbon content. *High-biodiversity land* is defined as including (a) wooded land without evidence of human activity before 2008 and where ecological processes have not been disturbed, (b) highly biodiverse grassland, and (c) nationally or internationally designated conservation areas. The criteria ensure the protection of ecosystems or species recognized by international agreements as rare, threatened, and endangered or included in lists compiled by intergovernmental organizations²² or by the International Union for the Conservation of Nature (IUCN). These rules are partly nonretroactive²³ to ensure some grandfathering by acceptance of existing activities for a period.

Special Criteria Related to Agroenvironmental Practices in the European Union

The agricultural-environmental criteria described in the RED apply only to biofuel produced from raw materials originating in the EU. The reasoning behind this jurisdictional limitation of the effects of these criteria is the

obligation of the EU and its member states to comply with World Trade Organization (WTO) provisions. Biofuel is subject to tariff cuts and discussion on trade and environment under the Doha Round (WTO, 2012) following negotiations on agricultural market access (European Commission, 2008a, p. 14).

The *vertical coordination* of the requirements related to all farmers from the international to national levels and *horizontal coordination* among agricultural, energy, climate, and environmental regulatory sectors through sustainability criteria in relation to the agricultural legislation are reflected in RED Article 17(5) incorporating the cross-compliance requirements mandatory in the allocation of financial support for agriculture under the Common Agricultural Policy (CAP) (European Commission, 2012a,c). Former major factors in the terms of CAP (Schnepf, 2006) were the CAP requirements for economic support of farmers' production of energy crops as nonfood and nonfeed sources.²⁴ Since the Health Check of the CAP, the issues of climate change and bioenergy production have been included in the *second-pillar priorities* (those in the policy of rural development), together with water management and biodiversity preservation as environmental priorities in the 2009 cross-compliance requirements,²⁵ reducing the risk of the negative impact of biofuel production in the EU.

Evidence, Calculation, and Verification

The ambition behind the RED sustainability criteria is to ensure that biofuel has fewer negative environmental effects than petroleum-based products. To demonstrate this, member states need to ask economic operators for three coregulatory remedies: (a) information on the operator's compliance with the criteria, (b) an adequate standard of independent auditing, and (c) "chain of custody" calculations based on mass balance systems²⁶ [cf. RED Article 18(1)–(3)]. The mass-balance system of the RED does allow sustainable and other raw materials to be mixed as long as the mixture includes only consignments with the same sustainability characteristics and as long as the size for each set of consignment sustainability characteristics is accordingly. Evidence of compliance with the land-related criteria could take many forms, including aerial photographs, satellite images, maps, land-register entries/databases, and site surveys. Economic operators importing cultivated raw materials must provide supplementary information about sustainable water and soil management plans and the use of dangerous agrochemicals in the relevant agricultural fields.

The RED defines a life-cycle methodology in Article 19 and Annex V for calculating the GHG emissions from biofuel production with respect to only direct emissions. The consequences of the ILUC are missing from the rules for this calculation. Annex V lists estimates of typical GHG savings from a number of wholly RES and partly RES biofuels. Annex V includes

- *default values* that the economic operators can use to provide evidence of compliance with the GHG-saving criterion, and
- *typical values* that can be used by member states in their biennial reporting to the EU.

Based on this methodology, the Commission has calculated default emissions for different biofuel production pathways. A new assessment of the policy has estimated that the ILUC must eliminate around 70% of the EU biofuel direct GHG savings, leaving a 17% savings in biofuel (Laborde, 2011).

As already mentioned, the member states are responsible for establishing verification systems. Their use of such systems can be flexible, but in the assessment of the systems available they must include factors regarding the need to maintain the integrity and effectiveness of verification systems as well as to avoid an unreasonable burden on industry [cf. RED Article 18(2)]. The RED requires the consideration of verification methods in which information about sustainability characteristics need not remain physically assigned to particular consignments or mixtures. In such *book and claim* systems the sustainability information and the raw material are traded separately from each other after feedstock production.

Voluntary Schemes

The RED legal design, includes the development of voluntary schemes by private actors, uses a legislative technique based on a coregulatory approach that consists of defining mandatory essential requirements to ensure the sustainable production of the biofuels used in the EU while leaving the possibility of voluntary schemes up to interested and knowledgeable parties. Recital 76 in the RED preamble states that the imposition of an unreasonable burden on industry should be avoided, and that voluntary schemes can help create solutions for providing compliance with the criteria. Therefore, the Commission may decide that voluntary national or international schemes setting standards can be recognized [cf. RED Article 18(4)–(6)].

The RED conformity assessment aims to ensure adequate protection of global interests in a sustainable development, focusing especially on climate change, biodiversity and poverty, coherence with the policies applied within the market, transparency in relation to standards, and harmonization of regulation among trading partners. When the Commission has checked a voluntary sustainability scheme thoroughly and is satisfied that it covers the sustainability requirements adequately, it grants the scheme recognition for five years. Recognized schemes are made available in the RED transparency platform. The Commission takes into account considerations of commercial sensitivity and may decide to publish a scheme only partially.

The Commission accepted the first global sustainability schemes for biofuel in July 2011.²⁷ In April 2012, the Commission accepted the Ensus voluntary scheme for bioethanol production because the scheme demonstrated compliance with the sustainability criteria. This Ensus scheme covers bioethanol from EU feed wheat produced by the Ensus One plant. Ensus is a private company that operates one of the world's largest cereal grain biorefineries at Wilton on Teesside in North East England. As the United Kingdom developed the first sustainability criteria for fuel transport, effective as of April 15, 2008 (two years before the RED),²⁸ this recognition indicates the impact that front-runner member states and their enterprises may have on the implementation of the criteria in being able to take an active part in coregulation.

Bilateral and Multilateral Agreements

As already mentioned, the EU has the competence to enter into bilateral and multilateral agreements on sustainability schemes with non-member states. As part of this, the Commission has the power to establish relations with non-member states regarding new compliance methods. The arrangements for cooperation regarding biofuels are subject to agreement between the EU and the third parties concerned [cf. RED Article 18(4)]. TFEU Article 3(2) provides that

the Union shall also have exclusive competence for the conclusion of an international agreement when its conclusion is provided for in a legislative act of the Union or is necessary to enable the Union to exercise its internal competence, or in so far as its conclusion may affect common rules or alter their scope.

Once the Commission has concluded a bilateral or multilateral agreement, its legal effects are twofold: the EU, as well as its member states, are bound by EU ratification of

bilateral and multilateral agreements covering biofuel issues (cf. TFEU Articles 216 and 288). As already mentioned, member states must offer access to their market and support such schemes. They cannot use any additional sustainability criteria.

Reporting Obligations for the European Commission

RED Article 18(2) required the Commission to report by December 2010 on the operation of the *mass-balance system* established by RED Article 18(1). This report was published on January 31, 2011 (European Commission, 2011a). The Commission must report again in 2012 and every two years thereafter.

RED Articles 17(7) and 23 require the Commission to monitor the origin of biofuels and the impact of the production of the raw materials on land use. The report must be submitted to the European Parliament and Council in 2012 and every two years thereafter. To prepare this report, the Commission has asked member states to send information making it possible to monitor the impact of increased demand for biofuel on social sustainability within and outside of the EU, as well as to assess the impact of food availability on affordability, especially for people in developing countries [cf. RED Articles 18(3) concerning the obligations of the member states to ensure accurate information from the operators, and RED Article 17(7) on the Commission's obligations to issue reports]. Issues that the Commission must report on include respect of land use rights, local governance, gender equality, social inclusion, public health, labor conditions, and the eradication of poverty. The Commission must also request the information needed to report on whether non-member states have ratified the Cartagena Protocol on Biosafety under the CBD, the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), and a number of International Labour Organization (ILO) conventions.

RED Article 19(6) indicates that the Commission must report on ILUC to the European Parliament and to Council. This report must be accompanied by a proposal, based on the best available scientific evidence, containing a concrete methodology regarding emissions from carbon-stock changes caused by such land use changes. As already mentioned, ILUC emissions are not part of the calculation criteria used by the market operators and the member states, but there are proposals to include the emissions in the future.

Exterritorial Effects of the Sustainability Criteria

As a powerful market, the EU applies its criteria extraterritorially, effectively imposing sustainability requirements on developing countries that export biofuel (or biomass to be used in the production of biofuel) to EU member states. The EU has, in other words, a regulatory power in exporting some of its normative preferences to other countries (Scheipers and Sicurelli, 2007; Wouters, Nollkaemper, and De Wet, 2008a, pp. 7–8).

Support for External Effects in the European Union Treaties, the Kyoto Protocol, and the Convention on Biological Diversity

The extraterritorial effect of the sustainability criteria is in harmony with TFEU Article 208. Based on this article, the EU shall take account of the objectives of development cooperation in the policies that it implements. Among the general provisions regarding the EU's external actions is the obligation to respect the principles that inspired its own creation, including the principle of sustainability [cf. TEU Article 21 and TFEU Article 191(4)]. The extraterritorial use of sustainability criteria is also in harmony with Kyoto Protocol Article 2(3), which declares that the EU together with other developed countries, as an "Annex I Party"

shall strive to implement policies and measures under this Article in such a way as to minimize adverse effects, including the adverse effects of climate change, effects on international trade, and social, environmental and economic impacts on other Parties, especially developing country.

The use of the sustainability criteria is also in harmony with the global efforts to reverse the loss of biodiversity, as the CBD requires integration of the conservation and sustainable use of biodiversity into relevant sectoral and cross-sectoral policies (Gebreselassie, 2012, pp. 52–57).

The Economic Reasoning: Do the Criteria Conflict with Rules of the World Trade Organization?

The reasoning behind the sustainability criteria's extraterritorial effect is not only the aforementioned sustainability conditions established by the RED. It is also in the EU's interest to avoid allowing non-member states producers a competitive advantage, as EU biofuel production has been impeded by its high production costs relative to the production costs in developing countries.

Non-European countries have questioned the legality of such criteria, but no assessment has been made by the Dispute Settlement Body under the WTO. Some WTO issues have also been taken into account in the legal design of the sustainable criteria on agroenvironmental practices as already described.

The WTO rules in the General Agreement on Tariffs and Trade (GATT) mandate equal treatment of "like products" where the mandatory sustainability criteria established by RED could be regarded as nonconformant, and sustainable and nonsustainable biofuels could be regarded as "like" products. The like-product approach is based on consumers' preferences in accepting a specific treatment of products as long as the difference applies also to domestic products. Nondiscrimination is usually implemented through *most-favored-nation treatment* and *national treatment*, which are both relative standards because they involve evaluating the treatment provided based on origin rather than defining an absolute standard of treatment. Mandatory sustainability criteria that hinder or prevent the use of nonsustainable biofuels that are "like" sustainable biofuels potentially conflict at least with GATT Articles I²⁹ and III (WTO, 1947; cf. Hudec, 2000).³⁰ However, GATT Article XX provides exceptions that may justify environment-related criteria as necessary to protect human, animal, or plant life or health, or as necessary to conserve exhaustible natural resources, when the measures are enacted in conjunction with restrictions on domestic production or consumption. Shared values on climate and biodiversity challenges related to the use of fuels can be the accepted legal reason for using these criteria.

Other Examples of European Union Criteria with External Effects

To combat illegal, unreported, and unregulated fishing, the EU has established a certification system with extraterritorial effects that can be compared to the sustainability criteria just described. The Illegal, Unreported and Unregulated Fishing (IUU) Regulation³¹ implements the UN Provisions of the Convention on the Law of the Sea (UNCLOS) relating to the conservation and management of straddling fish stocks and highly migratory fish stocks (UN Fish Stocks Agreement) and the UN Food and Agriculture Organization (FAO) Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas by use of a certification system. A regulation is directly applicable in the member states (cf. TFEU Article 288). As the world's largest market, the EU, through the IUU Regulation, enhanced its action

against the illegal, unreported, and unregulated fishing. The regulations established a new regulatory regime with external effects designed to ensure proper control of the *supply chain* for imported fishery products. Access to EU ports is now authorized only for fishing vessels flying the flag of a non-EU nation that can provide accurate information on the legality of their catch and have this information validated by their flag state. A certificate is required as a precondition for the import of fishery products into the EU. That certificate should contain information demonstrating the legality of the products and should be validated by the flag state of the fishing vessel, in line with that nation's duty under international law to ensure that fishing vessels flying its flag comply with international rules on conservation and management of fisheries resources. Under this scheme, EU member states establish and enact the conditions, procedures, etc., regarding the inspection and verification activities of vessels from non-EU nations. The aforementioned international agreements on fisheries predominantly set out the principle that all nations have a duty to adopt appropriate measures to ensure sustainable management of marine resources and to cooperate with one another. The IUU Regulation is in line with its international commitments, but it also has trade consequences for non-EU nations.

The amendment to the EU Emissions Trading System (ETS) Directive in 2008,³² which included aviation after January 1, 2012, is *another example* of the EU's extraterritorial regulation. A number of American and Canadian airlines and airline associations contested the measures transposing this directive into the law of United Kingdom. A case on the legality of the extraterritorial effects was brought before the High Court of United Kingdom and Wales. The High Court referred the case concerning the legality of the amended directive to a preliminary ruling by the CJEU. The CJEU ruling of December 21, 2011 (C-366/10), stated that the extraterritorial effects of the amended directive do not conflict with international law (CJEU, 2011). As regards the Kyoto Protocol, the CJEU observed that the parties to the protocol might comply with their obligations in the manner and at the speed upon which they agree. The CJEU pointed out that EU policy on the environment aims at a high level of protection. Thus, the EU legislature may in principle choose to permit a commercial activity in its territory only on conditions that operators comply with the criteria established by the EU. Although this ruling is *not* related to the import and export of goods, the CJEU opinion can be used as an indication of the legality of the sustainability criteria. However, there are also nonlegal aspects in the discussion of the extraterritorial effects of the EU

requirements. On February 21–22, 2012, a number of non-European countries met in Moscow to coordinate their opposition to aviation's inclusion in the EU ETS. The meeting resulted in a joint declaration and a series of suggested retaliatory measures to be used against European industry.

Summing Up on the Design of the Sustainability Criteria

The EU's legal design in framing the sustainability criteria ensures harmonization and uniformity of methodological criteria, standards, and indicators for sustainable production of goods and use of resources across jurisdictions in the transformation of international obligations on mitigation of GHGs and reduction of biological loss established by the UNFCCC and the CBD in the member states (Heyvaert and Etty, 2012, p. 2). The rules on sustainability criteria in RED Articles 17–19 involve a holistic and a coregulatory approach. The RED as well as the Commission's guidelines for national action plans on RES³³ stress that the organizations concerned and local authorities should be ensured an active role in the decision making (European Commission, 2011b). The inclusion of the sustainability criteria in the RED is a significant step toward ensuring that the biofuel industry develops in a way that produces the greatest net benefits for the foreseeable future, although uncertainty still exists regarding the development of the criteria and the certification system (Fabeny, Romero, and Ross, 2008, p. 32).

However, there is still a need to develop global regulation of biofuels. As stated in the UNEP (2011) report "Assessing Biofuels," the

number and diversity of sustainability schemes and initiatives call for harmonization. It has been suggested that in an era of global trade, only international certification schemes will ensure environmental aims. . . . [M]arket-based product certification usually only covers a fraction of the product market. . . . This may impose the risk of creating the appearance of sustainable production by some, while others may continue unsustainable production.

The EU sustainability scheme is an example of the complexity or fragmentation of law because it does not cover the solid and gaseous biomass used as RES in electricity production and heating (Banet, 2008, pp. 456ff.). The same crops are sometimes used both for biofuels and for the production of heat and electricity—but the criteria for solid and gaseous biomass used as renewable RES for the production of electricity and heat are not comparable to

the sustainability criteria applied to biofuels. A review by the Commission concluded in December 2010 that sustainability performance by the existing schemes regulating the solid and gaseous biomass is presently sufficient to avoid the need for introduction of criteria on such biomass (cf. European Commission, 2010). This Commission position has been criticized both by the nongovernmental organizations and by stakeholders working in biofuel production. In October 2012, the Commission presented a proposal for an amendment of the RED and the Fuel Quality Directive (cf. European Commission, 2012e). The aim of the proposal is to limit global land conversion for biofuel production. Based on this proposal, the ILUC has to be estimated and reported by member states and fuel suppliers.

The policy plans on the use of RES in 2010–20, presented to the Commission by the 27 EU member states by June 2010, showed that 60% of the EU's RES in 2020 will be based on biomass. With such a scenario, biomass consumption in the EU will in itself have negative global consequences that the EU needs to take this into account by developing a broader scope for the criteria.

Recent analyses of biofuels have also made it clear that it is a problem that ILUC is actually not included in the calculation of the GHG-emission and biodiversity consequences based on the RED. Biomass production is displacing current agricultural (food, feed) and forest (fiber, timber) production to other areas (i.e., grasslands or forested land), which causes direct land use effects at the new locations. This displacement could also move previous agricultural production to areas *outside of a country*—making it very complicated to calculate the effects.

Notes

1. Biofuel has advantages as one of the renewable energy sources supporting energy security, as well as the mitigation of greenhouse gas emissions.
2. Regarding the life-cycle approach used by the EU, see Jans and Vedder (2012).
3. The cross-sector, cross-technology approach is in contrast to the two former directives that were superseded by the RED: Directive 2001/77/EC on the promotion of electricity produced from renewable energy sources (the so-called Green Electricity Directive) and Directive 2003/30/EC on the promotion of the use of biofuels and other renewable fuels for transportation (the so-called Biofuels Directive) (European Parliament and Council, 2001, 2003).
4. The UN Framework Convention was signed at the 1992 Rio Conference. The text of the convention is available on line (UNEP, 1992b).

The UNFCCC objective is to stabilize greenhouse gases (GHGs) at a level that would prevent dangerous anthropogenic interference with the climate system.

5. The Convention on Biodiversity (CBD) was signed at the 1992 Rio Conference. The convention text is available on line (UNEP, 1992b). The CBD recognizes biodiversity loss as a global environmental problem and promotes the conservation of biodiversity as a common concern.
6. The strategy is presented in a Commission communication to the European Parliament and Council (European Commission, 2012d). This article is based on judicial methodologies and knowledge. It is without any scientific assessment of the EU's bioeconomy vision.
7. The former front-runner position of the US and the actual position of the EU were stated by Nicholas A. Robinson (2012), University Professor for the Environment, Pace University, and Gilbert & Sarah Kerlin Distinguished Professor of Environmental Law, Pace University School of Law.
8. *Coregulation* is defined in para. 18 of the 2003 Inter-institutional Agreement on Better Law-Making between the EU institutions as “the mechanism whereby a Community legislative act entrusts the attainment of the objectives defined by the legislative authority to parties which are recognized in the field (such as economic operators, the social partners, non-governmental organizations, or associations)” (cf. Basse, 2006, pp. 197–199).
9. See now the amended Treaty on the European Union (TEU) Article 3. The concept of sustainability were introduced into the 1992 Maastricht Treaty, and it was made more ambitious and clear in the 1997 Treaty of Amsterdam.
10. The Lisbon Treaty, which was signed on December 13, 2007, entered into force on December 1, 2009. It amends the EU's two core treaties: the TEU and the Treaty establishing the European Community—that is, the Treaty on the Functioning of the European Union (TFEU). In addition, several protocols and declarations are attached to the Lisbon Treaty.
11. Regarding the legal basis, see Jans and Vedder (2012), pp. 59–84.
12. Regarding the legal basis, see Jans and Vedder (2012), p. 104.
13. The minimum harmonization is relevant for all RED rules that are *not* related to the sustainability criteria.
14. The European Council shall act by qualified majority in such common commercial policy issues [cf. TFEU Articles 207(4) and 218].
15. Each member state is subject to individual, quantitative commitments that are based on economic, social, and environmental criteria set out in Part A of Annex I of the RED.
16. Regarding an obligation to implement rules on guarantees of origin, cf. RED Article 15.
17. Regarding such regulatory strategies based on an economic rationality in environmental law, cf. Edgeworth (2003), pp. 154–155, 168–169.
18. RED Article 17(1)(a).
19. RED Article 17(1)(b); Article 7(b) of the Fuel Quality Directive as amended in 2009 (European Parliament and Council, 2009b), and the provisions for E85 bioethanol as alternative fuel; and Article 6 of the Regulation on Performance Standards for New Passenger Cars and Light Commercial Vehicles (European Parliament and Council, 2009c).

20. RED Article 17(1)(c). It is also relevant for investment and/or operating aid in accordance with the 2008 Community Guidelines on State Aid for Environmental Protection (2008/C82/01) (European Commission, 2008b).
21. For example, see Hall (2012), with references to a note from the CBD executive secretary for the 16th meeting of the CBD's Subsidiary Board on Scientific, Technical and Technological Advice, in Montreal, April 30–May 5, 2012.
22. For example, the standards in the Bern Convention, the Bonn Convention, the Ramsar Convention, and the Biodiversity Convention were converted into Natura 2000 rules by the Habitats Directive (92/43/EEC) (European Council, 1992) and the Wild Bird Directive (2009/147/EC) (European Parliament and Council, 2009d).
23. If biomass is taken from what was wetland in January 2008 and still is wetland when the biomass is taken, using such material will not breach the criterion related to high-carbon stock. Biomass obtained from land that was peat land in January 2008 is excluded from the criteria if evidence is provided that cultivation and harvesting of the material do not involve draining of previously undrained soil. Biofuel production by installations in operation on January 23, 2008, is exempt from the obligations to comply with the GHG-saving criteria until April 1, 2013.
24. The requirements set aside were abolished by a decision (the Health Check) made on November 20, 2008, in the European Council.
25. The regulation establishing common rules for direct support schemes for farmers under the CAP (73/2009/EC) states that a farmer receiving direct payment shall respect the statutory management requirements listed in the Annex II and the “good agricultural and environmental conditions” (GAEC) referred to in Article 6 of the regulation (European Council, 2009).
26. A *chain-of-custody system* is the chronological physical or electronic documentation and/or paper trail showing the acceptance/purchase, custody, control, transfer, and disposition of a product or associated sustainable attributes (cf. Global Oil and Gas Industry Association for Environmental and Social Issues, 2010).
27. These voluntary schemes were granted recognition for a five-year period: the German government–financed scheme covering all types of biofuels [International Sustainability and Carbon Certification System (ISCC)]; the French-industry scheme covering all biofuels [biomass biofuel, sustainability voluntary scheme (2BSVs)]; the roundtable initiative for sugarcane-based biofuels, with a focus on Brazil (Bonsucro EU); the roundtable initiative for soy-based biofuels, with a focus on Argentina and Brazil [Roundtable on Responsible Soy (RTRS EU RED)]; the roundtable initiative covering all biofuels [Roundtable on Sustainable Biofuels (RSB EU RED)]; the industry scheme by Abengoa covering their supply chain [RED Bioenergy Sustainability Assurance (RSBA)]; and the industry scheme for green energy covering sugarcane ethanol from Brazil (Greenenergy).
28. Regarding the United Kingdom's sustainability criteria, especially the Renewable Transport Fuel Obligation (RTFO), see Haugen (2009), pp. 19–21.
29. GATT Article I sets out provisions in respect to the most-favored-nation principle, according to which members must extend any advantage granted to a product from one WTO member to “like” products from all other WTO members.
30. GATT Article III sets out provisions on the national treatment principle according to which internal taxes and regulations must treat imported products no less favorably than “like” domestic products.
31. European Council Regulation 1005/2008/EC (European Council, 2008) establishing a “Community system to prevent, deter and eliminate illegal, unreported and unregulated fishing.”
32. European Parliament and Council Directive 2008/101/EC (European Parliament and Council, 2008) amending Directive 2003/87/EC.
33. The Commission has prepared a model of RES action plans; see Resolution 2009/548/EF of June 30, 2009 (European Commission, 2009) establishing a model for a national Renewable Energy Action Plan (Section 4.2.1).

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