

TRENDS IN EUROPEAN BIOENERGY LAW: PROBLEMS, PERSPECTIVES AND RISKS

ALICE CAPUTO

*Lawyer specialized in European Environmental Law
and International Public Law
alicecpt@alice.it*

Abstract: Research into new forms of energy is a current challenge. This paper aims to inquire into the real advantages of bioenergy and its sustainable development within the European legal framework, while also considering the negative aspects of bioenergy use. The European Union, in fact, is an important supporter of bioenergy and shows that, through good legislative policy, the negative aspects of bioenergy use can be surmounted. In conclusion, bioenergy and sustainable development can still be a plausible solution to feed the planet.

Keywords: bioenergy, sustainable development, energy problems, European law.

INTRODUCTION¹

Energy is fundamentally important to the development of every country in the world. Its importance is clear: without energy human activity of every type is impossible. In particular, energy is important for the economic and social development of every country. Energy is necessary for life, but now it is necessary to search for types of energy that can be sustainable for the planet.

Bioenergy is a new form of energy and its use is becoming more prevalent in many countries of the world. Bioenergy is a possible solution for energy problems respecting, at the same time, sustainable development. The European Union is investing in bioenergy use, especially in the transport sector, and it has a precise legal framework which governs the bioenergy industry. In Europe, bioenergy plays a central role in national renewable energy action plans accounting for more than half of the projected renewable energy output in 2020. Thus, it can be said that sufficient materials exist to give an accurate evaluation of bioenergy usage in the European Union and of the value of the existing European legal framework. The aim of this research is to firstly, provide a thorough analysis of European directives, communications and links, and secondly, try and understand how the EU regu-

ISSN 2283-7949

GLOCALISM: JOURNAL OF CULTURE, POLITICS AND INNOVATION

2014, 1-2, DOI: 10.12893/gjcp.2014.1-2.10

Published online by "Globus et Locus" at www.glocalismjournal.net



Some rights reserved

lates and uses bioenergy. We analyse the recent trends in European bioenergy law; considering problems, perspectives and risks related to bioenergy use.

Although bioenergy has many negative aspects, it can encourage development and especially sustainable development if the existing legal framework provides a good balance between its negative and positive aspects thus increasing the second generation's use of biofuels, curbing the first generation's use of biofuels and ultimately safeguarding the environment.

General problems and opportunities related to bioenergy use are examined first, while the legal implications of bioenergy use within the European legal framework are looked at later. In conclusion, an analysis of perspectives and opportunities is made. We also endeavor to inquire into the role of the EU in the international bioenergy market.

ENERGY – BIOENERGY: DEFINITIONS, PROBLEMS AND METHOD. LINKS BETWEEN BIOENERGY AND THE PRINCIPLE OF SUSTAINABLE DEVELOPMENT

The word energy is derived from the Greek “energeia” where “en” means “inside” and “èrgon” means “work”. In common language it has preserved its original meaning of “capacity to make work,” while being enriched by another etymological shades of meaning: strength, vigor and effective operation. In Aristotelian philosophy, energy is “act”: the core of action. So, it is not wrong believe that when we speak about energy and energy problems we must intuitively look at methods and modalities that produce, feed, and support the capability of someone or something to make work.

Since we are no longer in the times when men or animals carry out every work project, our attention turns to systems and methods that produce energy. In particular, energy problems and the necessity to resolve them, characterize our modern society. Energy provides the capacity to produce light, to warmth and movement. But every method of energy production always has results that are partial and limited. Fossil fuels in particular (the principal resource in the energy sector), are by definition, limited.



There are many forms of energy in use in our world, but ultimately, two crucial requirements always intersect. The first requirement points to the necessity to seek out new energy sources since those used until now are finite. The second requirement considers the respect and protection of environment. This research underlines the necessity to link energy and its use to the protection of the environment; seeking safe and unlimited resources within the framework of sustainable development.

The concept of sustainable development seems distant from the subject of energy production.

But energy is an essential component of development. One must be conscious of the fact that development must be sustainable². So, we must not be surprised by the *rapprochement* of these two arguments. Also, we must not be surprised by the need to open a discussion about sustainable development³. The most important definition of the principle of sustainable development is offered by the World Commission on Environment and Development: WCED, the so called Brundtland Commission (after the name of the Norwegian Minister that presided over it) instituted in 1983 by the United Nations and composed of 21 representative countries. The work was finished in the 1987 with a final issuing statement that defines sustainable development as development which meets the needs and demands of the present generation without compromising the ability of future generations to meet theirs. Later, this concept was further developed during the Conference which took place in Rio Janeiro in 1992 and resulted in the Declaration of Environment and Development which builds on the definition given by the Brundtland Report with this specification: "In order to achieve sustainable development environment protection shall constitute an integral part of the development process and cannot be considered in isolation from it (Principle 4)". Moreover, there is an other conference to consider: The United Conference on Sustainable Development held in Rio de Janeiro on June 2012. This conference was an important event with an aim to address universal themes beyond the regional boundaries of State. In particular, the Rio 2012 Declaration considered the interconnection between environment and energy in addition to functional methods to reduce CO₂ emissions. One objective of the



Conference was to encourage exploration of alternative energy sources with uses compatible with new post-Kyoto environmental standards. The conference encouraged and promoted the use of bioenergy. The most important theme emerging from the Rio 2012 Declaration was the emphasis on the responsibility of the energy sector to consider the development and welfare of modern society. In fact, article 125 of the Rio 2012 Declaration considers the possible impact of energy development on the fight against poverty and on the rising standards protecting fundamental human rights. Energy is an important key to economic and social development. Article 126 of the Declaration considers how the diffusion of technological models within the framework of modern services could offer developing countries the possibility of using clean energy coming from abundant energy resources present at local level. But all of these aims must respect sustainable development. In fact, in the paragraph 128 of Rio 2012 Declaration, Governments declare: "We reaffirm support for the implementation of national and sub national policies and strategies, based on individual national circumstances and development aspirations, using an appropriate energy mix to meet developmental needs, including through increased use of renewable energy sources and other low emission technologies, more efficient use of energy, greater reliance on advanced energy technologies, including cleaner fossil fuel technologies, and the sustainable use of traditional energy resources". In the next article, Governments also affirm that: "We recognize that improving energy efficiency, increasing the share of renewable energy and cleaner and energy-efficient technologies are important for sustainable development, including in addressing climate change. We also recognize the importance of promoting incentives in favour of, and removing disincentives to, energy efficiency and the diversification of the energy mix, including promoting research and development in all countries, including development".

In light of these dispositions, it is clear that there is no place for energy promotion without the consideration of sustainable development. When there's an energy resource to explore, there is always sustainable development to consider. So, bioenergy potentially could be a



positive solution. Presently, the energy/environment relationship is not exclusively based on renewable sources, but includes all technological supports necessary to develop energy efficiency based on the combined use of renewable energy and fossil fuels. The use of bioenergy is still a relatively new phenomenon.

With regard to European law, the signing of the Amsterdam Treaty, in the 1997, inserted into the EU Treaty a unique way to test the development of harmonious, balanced and sustainable of economic activities (art. 2). The integration principle of environmental needs, within the definition of and the accomplishment of community politics and actions, has also been linked to sustainable development.

The Lisbon Treaty has not substantially changed the previous situation. According to Article 3 of the Lisbon Treaty, the EU endeavours to support sustainable energy development in Europe based on balanced economic growth, price steadiness, and a competitive social market economy, which aims to fully occupy social progress and to finally provide high level protection and quality environmental improvement.

The Article also recalls the solidarity between Member States. The concept of Solidarity is recalled by the European Charter Of Fundamental Rights inside title IV (relative to solidarity) and also regulates the protection of the environment (article 37) providing that: "A high level of environment protection and the improvement of its quality must be integrated in the European Union politics and it must be warrant in accordance with the principle of sustainable development". Article 191 of TFEU is very important with regards to EU environmental politics. In fact, one must consider the aspects of economic and social development in all scientific data available. The article also imposes the implementation of analysis concerning the "advantages and the burdens that can derive from action or from the lack of action". In particular, it seems important to underline this disposition: "analysis of advantages and burdens that can derive from action or from the absence of action" always following the thin thread that binds energy with sustainable development. In the last few years, one type of energy in use is bioenergy.



Bioenergy initially seems like an ideal solution for the resolution of energy problems. Bioenergy use is strongly encouraged because it seems to be a type of energy with little environmental impact; a type of energy with many advantages and few drawbacks. This feature of bioenergy has a great value in the analysis of sustainable development.

First of all, we need to provide the definition of bioenergy as it is used in this research⁴. The definition of bioenergy used in this context regards energy generated by biomass. Biomass is renewable energy of biological origin obtained from food crops. Bioenergy is a form of clean energy, renewable and natural, which differs from fossil fuels, which are instead, temporary and limited. In general, in common language and in scientific literature, there exists a distinction between the two generations of biofuels.

The first generation is fundamentally derived from food crops and it is divided into ethanol and biodiesel. The second generation includes biofuels extracted from edible residuals of agriculture food production (stalks, leaves, skins peels separated in crops) and from industrial residues. Often, especially in the last years, within the debate on bioenergy, there has been a diffused inclination to describe it like a completely clean and safe form of energy - like a solution to every energy problem or an easily obtainable result. In reality, there are many doubts, limitations and problems linked to the use of bioenergy. In particular, there are many points to consider with regards to the pros and cons of bioenergy use. In some cases, positive aspects may even become risks with a negative impact.

One can explain the positive aspects of bioenergy in few words: bioenergy is a type of self-sufficient energy as opposed to fossil fuels which are finite. The use of bioenergy is considered to be a good solution to climate change because its use reduces the use of fossil fuels therefore reducing the greenhouse gases derived from the use of liquid fossil fuels. Bioenergy is also considered a positive type of energy because of its connection to the restoration of degraded lands, the reduction of land abandonment and the increase of employment opportunities in rural areas. All of these aspects clearly demonstrate how the en-



ergy market and agricultural market are linked: agriculture consumes and produces energy.

Bioenergy is particularly important as it contributes to the energy needs of the transport sector⁵. Recently, high prices of petroleum have increased interest in bioenergy. Because of the low cost and the high level of development, the interest of bioenergy use is concentrated in food agriculture production. Moreover the second generation of technology, which aims to produce bioenergy for transport, is still underdeveloped, without considering that necessary technology will be available only in the next 15 years.

The positive aspects of bioenergy remain, but there are also many negative aspects to consider. Food security⁶ is the most serious. In fact, the high demand of bioenergy and, in particular, of first generation's bioenergy is a risk for poor farmers that depend, for their subsistence, on rural development. In fact, there is a real risk that water, land and other productive resources will be utilized not for food use but only to produce bioenergy. In Brazil for example, the demand for ethanol extracted from maize (corn) is pointing agricultural production away from food production to bioenergy production and is a cause for great concern and potential famine⁷.

Modern systems of bioenergy production must be synchronized with an increase of local food production and usage of marginal lands for the production of bioenergy. Considering the quantity of land needed to produce an amount of bioenergy sufficient to maintain the global economy, the risk of famine increase and of land rights violations is very serious indeed.

Another effect of bioenergy production on food security is the inflation of food prices. In fact, according to the market law of supply and demand, the interest of food in the bioenergy field is a possible cause of the increase of food prices in food markets resulting in negative consequences for poor farmers in rural economies. These negative aspects can produce a lack of food for many people.

Another aspect of bioenergy and food security to consider is climate change. One of the more positive aspects underlining bioenergy is, without doubt, the positive impact of bioenergy on environmental protection and, in particular, on climate change. But food security is subor-



dinate to climactic and weather phenomenon such as drought, floods and tropical storms, all of which may cause many problems for crops. This also causes an increase in food prices.

There exists another aspect to consider in regards to food quality: climate change is creating favourable conditions for animals and plant diseases, making food less safe⁸. Paradoxically, agriculture is not only a “victim” of climate change, but is also a cause of greenhouse gases. Growing cereal crops (especially rice) and raising cattle produces the release of greenhouse gases into the air and they, in turn, are responsible for the greater part of methane emissions. Moreover, deforestation and soil degradation, caused by unsustainable cultivations, are contributing to global warming.

The question of climate change mitigation is a point pending between the negative aspect and positive aspects of bioenergy use. In fact, plantations dedicated to the production of the raw materials for bioenergy can reduce greenhouse gas emissions (removing carbon dioxide from air) only when they produce and accumulate carbon dioxide in the root systems of cereal crops and in the surrounding subsoil as well as in the form of organic carbon or when they produce residuals which render the use of fossil fuels unnecessary. In each case, cultivation used for biofuels has a characteristic balance of greenhouse gases that can be also negative, depending on their method of production and their Physical location. For example, soya beans and, especially, maize (corn) are two types of crops that contribute to soil erosion and water pollution, needing both a greater quantity of fertilizer and pesticides as well as fuels in order to cultivate, harvest and desiccate. Moreover, business plans to expand biofuel production involve the creation of large scale mono-crop plantations that can threaten the biodiversity of ecosystems.

Considering all the factors previously explained, it becomes clear that the international community is in difficulty when confronted by such complex relations between environment and bioenergy. On the one hand, the current policies and practices in the field of biofuel production can threaten food security and ecosystems: through deforestation, agrochemical pollution, invading crop disease and the use of GMOs. Perhaps well-planned and well-



managed second generation biofuel production could contribute to future developments in sustainable energy: developments which consider the opportunity of environmental management to affect climatic change adaptation. In particular, the conversions of maize (corn), sugar, soya and palm oils into biofuels was the most discussed question at the FAO Conference dedicated to Global Food Security, climate change and bioenergy challenges in June 2008⁹. During this summer, a precise agreement regarding the use of first generation of bioenergy emerged.

In fact, the final declaration of the FAO Conference on Global Food Security affirms that bioenergy presents opportunities as well as challenges and invites international dialogue on the matter. The declaration has an important symbolic value and it clearly shows that bioenergy and climate change take a back seat to agriculture policy influenced by market demand and political rivalry.

The bioenergy question is increasing in importance at every international forum on energetic problems and environment matters. Bioenergy is the hottest theme found in many international agendas, along with all of its problems concerning usage and production. Food security is the weakest point of bioenergy use: emerging a kind of rivalry between first generation bioenergy and food rights.

The bioenergy question is one of global dimension. But our scope of inquiry will be restricted to the EU (while keeping an eye on the international dimension of the dialogue). In particular, the object of this research is the legislative approach of the EU with regard to these problems linked to bioenergy.

Every country of the world is facing energy problems. Energy derived from fossil fuels is limited by the temporal horizon. In particular, the EU Member States have small energy reserves and so there is a great necessity to search for adequate answers within the European context. The question must be asked: can bioenergy use be the solution for European energy problems? The search for a useful response must be made within the legal context. The methodology used in this research must be clearly outlined.

Bioenergy is a multifaceted issue and presents a complex set of considerations to be contemplated. As with



every multifaceted issue, it is helpful to consider the positions and the considerations of different sciences (like natural sciences) and not only the position of juridical science. In fact, the scientific data gathered from studies on bioenergy is very important: it represents the basis of every discussion, but the role of law is the necessary moderator in these discussions. The role of law regulates bioenergy use.

The method utilized in this research is normative. The rule will be the centre of our inquiry; in particular we will centre our attention on, firstly, the analysis of the European Directive on bioenergy in the EU and, secondly, on communications, links and reports in the EU. We will limit the area of research to regulations of bioenergy in the EU, without the consideration of international legal frameworks on bioenergy. The European legal frameworks are interesting in that they value the present point of the situation as well as the future horizon.

There are many questions on the table. What is the point of balance between positive and negative aspects of bioenergy in European policy? Is there a good solution within the European legislative framework for bioenergy problems? What are the future perspectives of bioenergy within the European context?

EUROPEAN LEGAL FRAMEWORK: OPPORTUNITIES AND SETBACKS

The European legal framework is very precise and detailed¹⁰. There are three important legal instruments: renewable energy directive 2009/28/EC, the Fuel Quality Directive and the Biofuels Directive of 2003. Many additional communications and links complete the legal reference. The Biofuels Directive of 2003 is the first legal intervention concerning bioenergy in the EU.

The Biofuels Directive of 2003 promotes the use of biofuels or other renewable fuels for transport, in particular the replacement of diesel or petrol for transport purposes in each Member State, with a view to contributing to objectives such as meeting climate change commitments, environmentally friendly security of supply and promoting renewable energy sources (art. 1). This di-



rective, in article 2, considers biomass as the biodegradable by-product of waste of products, waste and residues from agriculture, including vegetal and animal substances, forestry and related industries, as well as the biodegradable by-product of industrial and municipal waste. It also gives a detailed list of all the products to be considered biofuels. The Directive, in the article 3, provides many measures to ensure a minimum proportion of biofuels and other renewable fuels to be included in the transport market. Article 3, in fact, makes the provision: "Member States should ensure that a minimum proportion of biofuels and other renewable fuels is placed on their markets and, to that effect, shall set national indicative targets. Moreover, in the measures that they take, the Member States should consider the overall climate and environmental balance of the various types of biofuels and other renewable fuels and may give priority to the promotion of those fuels showing a very good cost effective environmental balance, while also taking into account competitiveness and security of supply".

The Directive makes a unique call for environmental balance (accountability) in the use of bioenergy.

It is important to consider the preamble of this Directive in order to understand the evolution of the European approach to biofuels and to bioenergy. This directive considers that there is a wide range of biomasses, which could be used to produce biofuels, deriving from agricultural and forestry products, as well as from the residues and waste of the forestry and agri-food-stuffs industry. What is clear that the Directive includes a definition of bioenergy, which includes first generation and second generation biomass, without any differentiation. Moreover, bioenergy is considered a clean source of energy, or alternative source of energy with the means to reduce the excessive CO₂ emissions in the transport industry. The increased use of biofuels for transport (along with other possible alternative fuels, including automotive LPG and CNG) is one of tools by which the Community can reduce its dependence on imported energy and thereby influencing the transport fuel market and hence the security of energy supply in the medium to long term scenario. The preamble also recalls the positive impacts of bioenergy use. Point number 15 states: " Promoting the



use of biofuels in keeping with sustainable farming and forestry practices laid down in the rules governing the common agricultural policy could create new opportunities for sustainable rural development in a more market – orientated common agriculture policy geared more to the European market and to respect for flourishing country life and multifunctional agriculture, and could open a new market for innovative agricultural products with regard to present and future Member States”.

This is the European framework, but in order to carry out the Directive in a logical and multi-faceted fashion it must take into consideration the national policies, which in turn will implement the directive. According to point 20 of the preamble, an optimal method for increasing the share of biofuels in national and European Community markets depends on the availability of resources and raw materials, national and Community policies that promote biofuels, tax arrangements as well as appropriate involvement of all stakeholders/parties.

Obviously, the Biofuels Directive of 2003 has no recent considerations of bioenergy. Worst of all, there is no consideration of the negative impacts of first generation bioenergy on the environment. The Directive contains a significant imbalance between the positive and negative aspects of bioenergy.

The Directive of 2009 seems more evolved than the Directive of 2003. The Renewable Energy Directive 2009/28/EC approved by European Parliament on 17 December 2008 includes important news. This Directive demands two important requirements. The first is the decision of the EU to count on bioenergy as a solution to energy production problems as well as a way to fulfil the energy requirements of EU.

The second requirement considers environment protection and sustainable development.

This Directive outlines a series of measures to curb (and possibly eliminate) the negative effects caused by the use of bioenergy. In short, the first measure can be synthesized in the following objective: to achieve by 2020 a 20% share of RES in final energy consumption and a 20 % increase in energy efficiency.

Moreover, there is the goal of reaching a 10% target for renewable energy sources in transport in each of the



Member States. This target takes into consideration the requirements of bioenergy as a solution to energy problems, including a wide view of developing this type of energy. In fact, the Directive contains the requirement of the National Renewable Energy Action Plans of June 2010.

With regard to second aspect, the Directive of 2009 provides for many detailed measures in environmental protection, respecting the Directive of 2003. This is a synthetic list: *a)* Harmonized approach with Fuel Quality Directive; *b)* no biofuels from carbon rich or bio-diverse lands; *c)* Bonus of 29 g CO₂/MJ for biofuels from degraded/contaminated land, mass balance approach for certification of sustainability; *d)* establishment of a committee for sustainability of biofuels, obligatory report on compliance with environmental and social sustainability criteria of major biofuels exporting countries; *e)* order on biofuels, from waste, residues, no cellulosic food material, and lignocellulosic material that will count twice for RES transport target.

Following the European legal framework, it is obvious that the first aim of Europe is an increase in bioenergy use. We must remember that Europe is a great energy importer because it does not possess big fossil fuel resources of its own to produce energy according to its needs¹¹.

So, for the EU, bioenergy is relevant for an important reason: it can reduce energy dependence on fossil fuels. But, Europe, within its legal framework, must carefully consider the burdens of bioenergy use in order to preserve the principle of sustainable development. In the more mature European Directive of 2009 arises the necessity to invest in second generation biomass simply because first generation bioenergy is dangerous for the environment. At the same time, European expectation is very high. For example, the Directive foresees a minimum GHG reduction for biofuels as 35% to 50% from 2017 on and as 60% for new installations from 2017 on. For plants operating in January 2008, GHG requirement will start in April 2013.

The intention of the EU to reduce the negative aspects of bioenergy use is contained and articulated in the Directive 2009/30/EC amendment to Directive 98/70/EC on environmental quality standards for fuel, the so called: Fuel Quality Directive.



The amendment to the Fuel Quality Directive aims to tighten the environmental quality standards for a number of fuel parameters, enabling a more widespread use of ethanol in petrol and introducing a mechanism for reporting the reduction of life cycle greenhouse gas emissions from fuel.

On the side of environmental protection, the Fuel Quality Directive forecasts incorporation of sustainability criteria for biofuels used to meet GHG reduction requirement; the creation of a specific Committee that will join with RED to coordinate energy and environment aspects in the future development of sustainability criteria.

After a quick analysis of the legal principles of the European framework it is possible to underline some observations: the European Union wants stimulate concrete use of bioenergy especially in the transport sector, the European legal framework contains a delicate balance of positive and negative aspects of bioenergy use.

The Directives contain corrective measures to also assure the respect of sustainable development in the use of bioenergy. Point number 10 of Fuel Quality Directive preamble reads: "Biofuels used for compliance with the greenhouse gas reduction targets laid down in this Directive should therefore be required to fulfil sustainability criteria. In order to ensure a coherent approach between energy and environment policies, and to avoid the additional costs to business and the environmental incoherence that would be associated with an inconsistent approach, it is essential to provide the same sustainability criteria for the use of biofuels for purposes of this Directive on the one hand and Directive 2009/28/ EC on the other".

For same reasons, double reporting should be avoided in this context. Furthermore, the Commission and other competent national authorities should coordinate their activities within the framework of a committee specifically responsible for sustainability aspects.

Point 11 of the Preamble specifies that: "The increasing worldwide demand for biofuels, and the incentives for their use provides for in this Directive, should not have the effect of encouraging the destruction of biodiverse lands. Those finite resources, recognized in various international instruments, to be of value to all mankind, should be preserved."



Consumers in the community would, in addition, find it morally unacceptable that their increased use of biofuels could have the effect of destroying bio-diverse lands. For these reasons, it is necessary to provide sustainability criteria ensuring that biofuels can qualify for the incentives only when it can be guaranteed that they do not originate in bio-diverse areas or, in areas designated for nature protection purposes or for the protection of rare, threatened or endangered ecosystems or species. The relevant competent authority must demonstrate that the production of the raw material does not interfere with those purposes¹².

Sustainability criteria should consider forest as bio-diverse where it is a primary forest in accordance with the definition used by the Food and Agriculture Organization of the United Nations (FAO) in its Global Forest Resources Assessment (in use worldwide to report on the extent of primary forest or where it is protected by national nature protection law). Areas where collection of non-wood forest products occurs should be included, provided the human impact is small. Other types of forests as defined by the FAO, such as modified natural forests, semi natural forests and plantations, should not be considered as primary forests. Furthermore, biofuels made from raw materials originating in highly bio-diverse zones of certain grasslands (both temperate and tropical) including highly bio-diverse savannahs, steppes, scrubland such lands and prairies should not qualify for the incentives provided for by this Directive.

Moreover, the Commission should establish the appropriate criteria and geographical ranges to define such highly bio-diverse grasslands in accordance with the best available scientific evidence and relevant international standards. The principal setback of bioenergy use is surmounted by a special focus on second generation biomass and with an emphasis on particular control and monitoring of the type of biomass utilized in accordance with international parameters on the question.

In Europe, it is clear that there is no place for the bioenergy use without respect for the environment. These objectives are present within the European legal framework. In point 15, the European legislator orders that: "The incentives provided for in this Directive will en-

courage increased production of biofuels worldwide. Where biofuels are made from raw material produced within the Community, they should also comply with Community environmental requirements for agriculture, including requirements for the protection of the quality of groundwater and surface water, and with social requirements. However, there is a concern that production of biofuels in certain third countries might not respect minimum environmental or social requirements.

It is therefore appropriate to encourage the development of multilateral or bilateral agreements and voluntary international or national schemes that cover key environmental and social consideration in order to promote the production of biofuels worldwide in a sustainable manner. In the absence of such agreements or schemes, Member States should require economic operators to report on those issues”.

In this point, special consideration must be given to important details concerning the respect of minimum environmental or social requirement of biofuels production in certain third countries by the European Union.

Particular attention is given to unify this point with the dimension of international bioenergy use¹³. The European legal framework acknowledges international needs and presently protects the respect of genuineness in bioenergy use also in third countries¹⁴. In fact, an important setback in the bioenergy question is the inability to reach a homogeneity of legal framework in every country, not overall homogeneity, but a minimum homogeneity in the fundamental environmental protection with regards to bioenergy use. The role of law holds importance in this aim and the European legal framework surrounding the bioenergy industry could be a good normative example¹⁵. Unfortunately, there does not yet exist a specific level of safeguarding the negative aspects of bioenergy within the legal framework of every country. This is a setback not only within the international dimension, but also within European dimension, because every national legal framework in Europe does not ensure the same level of protection and at the same level of development in the field of bioenergy use. Bioenergy and renewable energy are still under examination. Though Europe has a good



legal framework, the question of bioenergy remains an open question.

RECENT TRENDS IN EUROPEAN COMMUNICATIONS AND LINKS

When regarding the underlined aspects of the bioenergy question (still an open question), it is possible to observe that European legislation in this field is not a closed circle, but a open space which also contains several communications and links that complete the Renewable energy directive 2009/28/EC, the Fuel quality directive and the Biofuels Directive of 2003¹⁶. Proof that bioenergy still is an open question is found in the EC Communication on Climate and Energy policy frameworks in the period from 2020 to 2030, where one reads that: "The future of European Union transport development should be based on alternative fuels as an integrated part of a more holistic approach to the transport sector. It is clear that first generation biofuels have a limited role in decarbonising the transport sector. A range of alternative renewable fuels and a mix of targeted policy measures building on the Transport White Paper are thus needed to address the challenges of the transport sector in a 2030 perspective and beyond".

The communication on Energy Technologies and Innovation of 2 May, 2013 moves in the same direction: it aims to bridge the gap between research and market deployment and provide a boost for a wide range of energy technologies, including the cutting of energy consumption and innovation in energy storage, radioactive waste management and alternative fuels, as well as renewable cooling and concentrated solar thermal power for industrial heating. A strengthened SET plan steering group will develop a road map for energy innovation by the end of this year.

Moreover, an action plan for investments should follow¹⁷. The new plan would be financed through European Union's Horizon 2020 research program and other sources such as the European Investment Bank and Connecting Europe Facility. Funding would also come from the member states and the private sector.



Unfortunately, an important step to minimize the negative aspect of bioenergy is at stake. In fact, on 12 December 2013 no compromise was reached on regulations following the vote on capping “first generation” biofuels and the European Commission proposal to minimize the climate impact of biofuels and alternative fuels strategy. This compromise, proposed by Lithuanian Presidency, failed, but there is some possibility that it may be discussed before the end of 2014. This compromise regards a decision (voted in with a narrow majority) taken on the subject of first generation of biofuels. The decision states first generation biofuel should not exceed 6% of final energy consumption in transport by 2020, as opposed to the current 10% target in existing legislation, while advanced biofuels should represent at least 2,5% of energy consumption in transport by 2020. The MEP vote also endorses double-counting of biofuels produced from UCO or animal wastes and a minimum 7,5% limit of ethanol in gasoline. Finally, it was decided to include an ILUC factor in the Fuel Quality Directive methodology as of 2020.

European Communications prove that the EU, providing of a precise legal framework for the bioenergy field, is seeking a balance in the future between negative and positive aspects of bioenergy. This is, at the same time, a good occasion to check the real efficacy of this new form of energy and a wonderful opportunity to crystallize European legislation on bioenergy.

Admittedly, there still exists uncertainty among advanced biofuels investors and Member States. In the European Union there is an acute necessity to replace first generation biofuels with second generation of biofuels. In particular, the Europe Launches Clean Fuel Strategy advocates support for sustainable advanced biofuels produced from lignocellulose feedstock and water, as well as from algae and microorganisms. The Strategy recommends no public support for first generation biofuels produced from food crops after 2020.

In October 2012, a proposal was approved which minimizes the climatic impact of biofuels, by emending the current legislation on biofuels through Renewable Energy and Fuel Quality Directives. The proposal suggests:

- a) To increase the minimum greenhouse gas saving threshold for new installations to 60% in order to improve



the efficiency of biofuel production as well as discouraging further investment in installations with low greenhouse gas performance; *b*) To include indirect land use change factors in the reporting by fuel suppliers and member states of greenhouse gas savings of biofuels and bio-liquids; *c*) To limit the amount of food crop-based biofuels and bio-liquids that can be counted towards the European Union's 10% target for renewable energy in the transport sector by 2020, to the current consumption level, 5% up to 2020, while keeping the overall renewable energy and carbon intensity reduction targets; *d*) To provide market incentives for biofuels with no or low indirect land use change emissions, and in particular the 2nd and 3rd generation biofuels produced from feedstock that do not create an additional demand for land, including algae, and various types of waste, as they will contribute more towards the 10% renewable energy in transport target of the Renewable Energy Directive.

ANTI-DUMPING DUTIES ON IMPORTS OF BIODIESEL FROM ARGENTINA AND INDONESIA

The last important point to be considered upon entering the arena of international trade is anti-dumping duties on imports of biodiesel from Argentina and Indonesia. Indeed, Argentina and Indonesia are two countries who export big amounts of ethanol and biodiesel products to the European Union. IN November 2013, the European Union imposed definitive anti-dumping duties on imports of biodiesel from Argentina and Indonesia.

Antidumping measures consist of an additional duty of on average 24,6% for Argentina and 18,9% for Indonesia. The measures are based on a decision taken by the Council following a 15-month investigation carried out by the European Commission. The investigation revealed that Argentine and Indonesian biodiesel producers were dumping their products on the European market¹⁸. Dumped exports had a significant negative effect on the financial and operational performance of European producers. Moreover, according to Hart Energy Research & Consulting's *Global Biofuels Outlook 2013*, the European Union biodiesel demand will continue to rise based on in-



creasing diesel consumption, but supply will rely on imports. Anti-dumping duties on biodiesel imports from Indonesia and Argentina will eventually stop these flows from flooding major exporters of biodiesel to the EU¹⁹. Definitive anti-dumping measures will apply for five years and, in addition to restoring fair competition, are expected to ensure the continued development of an innovative green energy sector in the EU.

Anti-dumping measures also exist with the United States of America. Until 2010, the U.S. and Canada were important biodiesel exporters to the European Union. Commission regulation n. 1937/2009 imposed a provisional anti dumping duty on imports of biodiesel originating in the United States of America. European Commission procedure started in 2008 with the initiative of European Biodiesel Board. However, the EU cut its imports by imposing anti-dumping and anti-subsidy duties in mid-2009. These duties will expire in July 2014. At this time U.S. biodiesel could come back into the EU market.

The EU position on biodiesel imported from Argentina, Indonesia and U.S. can be interpreted in many ways. Firstly, anti-dumping duties on imports of biodiesel from Argentina and Indonesia can appear to be exclusively an economic choice, considering the necessity to preserve the European producers. This position was born from economic valuations, but not only. This manoeuvre can be placed within a legal framework that outlines precise aims to pursue a green economy²⁰.

The EU aims to minimize their dependence on biodiesel imports and to strengthen second generation bioenergy use that respects environmental protection. The EU has a strategic plan related to sustainable development and to reduction of greenhouse gas emissions. It is interesting to consider how the EU can influence international environmental law and international legal frameworks surrounding bioenergy. Underling this economic position on biodiesel imports, it is clear that the EU can influence the tendencies of the energy market. The EU can play a positive role addressing the development of energy markets in line with a serious respect for the environment²¹. The EU expectations with regards to development

of a green economy can exist without this strong dependence on energy.

CONCLUSION

Is it possible to realize sustainable development through bioenergy use? The aim of this research is to inquire into the possible development of bioenergy use as a solution to the classic problem of finding methods of energy production which ensure environment protection. In recent years, there has arisen many conflicting opinions on bioenergy because first generation bioenergy has many disadvantages and few advantages. In particular, it is dangerous for the environment and food security. But, in recent years, second generation bioenergy has proven to be a good solution to the problem energy supply in that it can be a source of clean energy for the future. The area of our research is limited to the European Union. We can say that the European Union has always had some problems with energy resources and in recent years is counting on renewable energy. There are many directives to discipline the use of bioenergy in European law and many communications and reports to address the future development of bioenergy use in Europe. But the subject of energy problems is not the only open question for Europe. Bioenergy use can be a good solution for every country in the world. But it is necessary to set out positive aspects of bioenergy that are intimately related to the respect of environment and sustainable development. The European Union's approach to bioenergy shows that a correct and precise legal framework can optimize bioenergy use by addressing the development of this form of energy: second generation bioenergy. The role of Law - adopting a good legal framework - ensures the security of this form of energy: respecting lands, water, air, safeguarding food production and at the same time, providing the possibility to exploit a form of energy that can be defined "clean". In conclusion, the European legal framework is a good model to balance the positive and negative aspects of bioenergy. The manner in which legal framework is carried out determines the success of its contribution to alleviating food insecurity and poverty



and assuring responsible use of bioenergy. Following the European legal framework, a few recommendations can be made for country of the world: eliminate the use of first generation bioenergy and enhance second generation bioenergy; set clear objectives and programs through a legal framework that balances the necessity to produce energy with respect for the environment. The EU can also play a good role and have a positive influence when addressing the issue of developing energy markets that are in line with respect for the environment. The EU position on biodiesel imported from Argentina, Indonesia and USA is a good example of the importance of EU leadership in the building of a global green economy.

NOTES

¹ I would like to thank Mr. Blaise Kuemlangan, Chief of the Development Law Service in the Legal Office of the Food and Agriculture Organization of the United Nations (FAO), for the very helpful notes and information he gave me during an interview before to write this working paper.

² The legal literature on international environmental law, born in the last thirty years and related to the relationship environment/energy starting from the protection of natural resources is broad. See M. Fitzmaurice, *Contemporary Issues in International Environmental Law*, Cheltenham, 2009.

³ For an examination of the sustainable development peculiarities with particular attention to the energy sector, see F. Vetrò, *Sviluppo sostenibile e problemi dell'energia*, in A. Police, A. Crismani (a cura di), *Scritti in onore di Maria Luisa Bassi*, Napoli, 2011. See also FAO, *UN-Energy, Sustainable Bioenergy: A Framework for Decision Makers*, 2007.

⁴ For an exhaustive description, see: FAO 2009, *Case Studies on Bioenergy Policy and Law: Options for Sustainability*, p. 6 ss.

⁵ See World Watch Institute, *Biofuels for Transport: Global Potential and Implication for Sustainable Energy and Agriculture 2007*, London, Earthscan.

⁶ See FAO, Rome 2006, *Policy Brief Food Security*, n. 2.

⁷ Zibelchi, *The Dark Side of Agrofuels: Horror in the Brazilian California*, Center for international Policy, Americas Program, 2007.

⁸ For a complete analysis of bioenergy consequences see: FAO 2009, *Case Studies on Bioenergy Policy and Law: Options for Sustainability*. For a exhaustive description, see also, Bellarby, Foereid, Hastings, Smith, *Cool Farming: Climate Impacts of Agriculture and Mitigation Potential*, Greenpeace International, 2008.

⁹ During the conference the right food has been discussed in more occasions. See also *Right to Food: What is the Right to Food?*, FAO, Rome, 2005, Voluntary guidelines.

¹⁰ For an in depth analysis of the normative sources also in relation to the environment/energy relationship, see M. Marletta, *Energia. Integrazione europea e cooperazione internazionale*, Torino, 2011.

¹¹ See IEA, *Will Coal Remain a Fuel of Choice?*, World Energy Outlook, 2012.

¹² See *Actions Commitments. Sustainable Energy for all*, at www.sustainableenergyforall.org

¹³ It is very appreciable because there is the lack of strong international institution dedicated to sustainable development that controls practices and policies of the States. But, there is agreement that the Commission on Sustainable Development has been too

weak and needs to be transformed in a more powerful institution. In this regard, European Union, Norway and Switzerland proposed the creation of a Sustainable Development Council which meets more regularly and has more resources and authority.

¹⁴ In European Union dimension, for a very good analysis of the lack of any individually justiciable environmental right of a substantive or procedural character under the EU Charter of Fundamental Right, see G. Marin Durán, E. Morgera, *Commentary on Article 37 of the EU Charter of Fundamental Rights – Environmental Protection*, School of Law Working Paper Series (SSRN 2013).

¹⁵ For an investigation on the several reasons of EU environmental law as interesting topic for international environmental lawyers, see E. Morgera, *Introduction to European Environmental Law from an International Environmental Law Perspective*, Edinburgh Europa Paper Series, 2010.

¹⁶ Bioenergy is an open question, in fact the EU is seeking new adjustments to minimize negative aspects and setbacks to bioenergy use, but, in the same time, the European legal framework existed is very detailed. See for a widening L. Kramer, *Regional Economic International Organizations: The European Union as an Example*, in *The Oxford Handbook of International Environmental Law*, Oxford, 2007.

¹⁷ In particular, see EEA report n. 6/2013, *EU Bioenergy Potential from a Resource Efficiency Perspective*, elaborated by European Environment Agency to support decision making in this complex area.

¹⁸ According to the investigation's findings, Argentine and Indonesian companies benefit from an unfair advantage because they have access to raw materials at prices that are artificially low compared to the world market prices available for the EU biodiesel producers. The reasons for this are high export taxes imposed by Argentina and Indonesia on raw materials used in the biodiesel production (soya beans and soybean oil in Argentina and palm oil in Indonesia). The investigation found that the dumping margin for Argentina was between 41.9% and 49.2% and for Indonesia between 8.8% and 23.3%.

¹⁹ The reaction of Argentina has been very severe. In fact, in May 2013, Argentina filed a complaint against the EU in the World Trade Organization (WTO) Secretariat related to measures implemented by the EU to promote the use of energy from renewable sources and to introduce a mechanism to control and reduce greenhouse gas (GHG) emissions and measures to establish support schemes for the biodiesel sector. This dispute is still in consultation at the WTO. The Argentine government is preparing to take the EU to the WTO again to challenge these duties. Argentina's biodiesel producers, organized under the Biodiesel Producers Association, are also considering complaining to the European Court of Justice. The reaction of Indonesia is also severe. On July 27, 2012, Indonesia submitted a complaint to the WTO, which claimed that the EU investigation and measures are not consistent with the WTO rules.

²⁰ But Hart Energy Research & Consulting projects that the EU biofuel producers will not be able to meet the 2020 target for renewable energy in transportation (i.e., 10% share in the total fuel mix). Having this in mind, as well as the ongoing discussion on sustainability of biofuels and possible revisions of the biofuels policy, Hart Energy Research & Consulting expects that the EU will not continue a strategy with a separate target for biofuels in the 2030 framework.

²¹ About this consideration, a good analysis is explained in H. Vedder, *Diplomacy by Directive: An Analysis of the International Context of the Emissions Trading Directive*, Social Science Research Network, 2010. See also K. Inglis, *Enlargement and the Environment Aquis*, in "Reciel", 13 (2004).

REFERENCES

Actions Commitments. Sustainable Energy for all, at www.sustainableenergyforall.org.
Bellarby, Foereid, Hastings, Smith, *Cool Farming: Climate impacts of agriculture and mitigation potential*, Greenpeace International, 2008.

- G. Marin Duràn, E. Morgera, *Commentary on Article 37 of the EU Charter of Fundamental Rights - Environmental Protection*, School of Law Working Paper Series (SSRN 2013).
- EEA report n. 6/2013, *EU bioenergy potential from a resource efficiency perspective*, elaborated by European Environment Agency, 2013.
- FAO 2009, *Case studies on bioenergy policy and law: Options for sustainability*, Rome, 2009.
- FAO, *Policy brief food security*, n. 2, Rome, 2006.
- FAO, *UN-Energy, Sustainable Bioenergy: A framework for decision Makers*, Rome, 2007.
- M. Fitzmaurice, *Contemporary issues in international environmental law*, Cheltenham, 2009.
- IEA, *Will coal remain a fuel of choice?*, World energy Outlook, 2012.
- K. Inglis, *Enlargement and the Environment Aquis*, in "Reciel", 13 (2004).
- M. Marletta, *Energia. Integrazione europea e cooperazione internazionale*, Torino, 2011.
- E. Morgera, *Introduction to European Environmental Law from an International Environmental Law Perspective*, Edinburgh Europa Paper Series, 2010.
- L. Kramer, *Regional Economic International Organizations: The European Union as an Example*, in *The Oxford Handbook of International Environmental Law*, Oxford, 2007.
- H. Vedder, *Diplomacy by Directive: An Analysis of the International Context of the Emissions Trading Directive*, Social Science Research Network, 2010.
- F. Vetrò, *Sviluppo sostenibile e problemi dell'energia*, in A. Police, A. Crismani (a cura di), *Scritti in onore di Maria Luisa Bassi*, Napoli, 2011.
- World Watch Institute, *Biofuels for Transport: Global Potential and Implication for Sustainable Energy and Agriculture 2007*, London, Earthscan.
- Zibelchi, *The Dark Side of Agrofuels: Horror in the Brazilian California*, Center for international Policy, Americas Program, 2007.

ISSN 2283-7949

GLOCALISM: JOURNAL OF CULTURE, POLITICS AND INNOVATION

2014, 1-2, DOI: 10.12893/gjcp.2014.1-2.10

Published online by "Globus et Locus" at www.glocalismjournal.net

Some rights reserved