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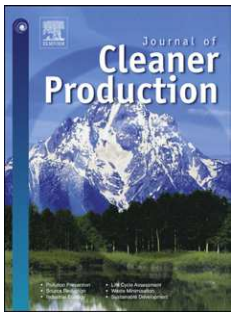

European union leadership in biofuels regulation: Europe as a normative power?

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Research highlights

- We review the biofuels policy of the European Union.
- We examine whether the EU could be regarded as a ‘normative power’.
- EU policy is viewed through the prism of the four dimensions of sustainability.
- EU policy is largely unsustainable socially, environmentally, temporally and economically.
- Normative intentions present, but economic competitiveness more central.

European Union leadership in biofuels regulation: Europe as a normative power?

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Abstract

The rapid emergence of the European Union (EU) as a leader in global environmental politics has led many scholars to argue in favour of the EU being a 'normative power' in international relations. This paper critically examines the EU's biofuels policy and evaluates whether its attempts to lead by example and shape international practice in this field could support such arguments. Europe's biofuel policies are evaluated through a sustainable development lens, so as to determine the extent to which it has embraced a holistic approach to sustainability. While not dismissing that the identity of the EU is indeed an explanatory factor and that normative intentions may well be regarded as a motivating force, this study argues that an interest-based perspective on international environmental regulation offers a supplementary view of how an actor's preferences for an international regime are shaped. By erecting barriers aimed at shielding its own inefficient domestic biofuels production the EU is in essence placing trade competitiveness and economic growth above environmental protection, thus permitting sustainability concerns to be addressed only in part.

Keywords: biofuels, sustainability, trade, environment, economy, society.

1. Introduction

The European Union (EU) has made significant efforts during recent decades to position itself as a leader in environmental policy and indeed plays a significant and powerful role in promoting the concept of sustainable development on the global scene (Vogler, 2003). The EU has taken a leadership role in the international negotiations on a number of environmental issues, with its role in the development of an effective and comprehensive regime on climate change naturally standing out and having received almost universal praise in the literature, as well as in the media (Afionis, 2011). Apart from its active and high profile role in the climate regime, Europe's environmental legislation is among the most advanced and progressive worldwide in a wide range of other areas, from greenhouse gas emissions trading to recycling, waste management, biosafety and eco-labeling (Falkner, 2007; Kelemen, 2010).

The EU has been attempting to 'carry the sustainable development flag on the international scene' since the 1992 United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro (Lightfoot and Burchell, 2004). Indeed, in the run-up to this landmark event, the 1990 Dublin European Council noted that the capacity of the EU to 'provide leadership' in the field of international environmental policymaking is 'enormous' (European Council, 1990). With the concept of sustainable development becoming increasingly an accepted part of scientific and political discourse, the EU decided to proclaim it an official goal to be integrated in all EU policies and decision-making (Baker, 2006). Far from it being just another political aim of the EU, sustainable development was explicitly included – for the

first time ever – as a fundamental objective in its relations with the wider world, in the 1997 Amsterdam Treaty, as well as in its 2001 Nice and 2007 Lisbon successors.

Consequently, Europe is involved in a continuing process to keep sustainable development on the agendas of instrumental international organizations and processes, such as *inter alia* the G-8, G-20, World Bank, UN Security Council and General Assembly and World Health Organization. Europe played a rather constructive role during the 2002 Johannesburg World Summit on Sustainable Development (WSSD or Rio+10) (see Lightfoot and Burchell, 2004), with its officials being eager to ensure that the deliberations of the 2012 Rio+20 conference in Brazil further augment the image of the block as a green leader and role model for other state actors. With the focus being mainly on the theme of 'green economy', Rio+20 represents an ideal platform for Europe to globally communicate its recently-adopted 'Europe 2020 Strategy' for 'smart, sustainable and inclusive growth' (see European Commission 2010a).

At first sight, this emergence of the EU as a pivotal actor in global environmental policymaking lends support to the claim that universal values and norms are at the centre of European foreign policy. The EU has thus been described as a civilian power, a soft power and more recently as a normative power in international relations.[1] The latter term was first coined by Manners (2002) to describe the EU as a distinct actor that is guided by and seeks to advance in the wider world the values and ideas on which it is founded upon, including democracy, the rule of law, human rights and fundamental freedoms (Merlingen & Ostrauskaite,

[1] The meaning of these three terms is more or less similar. A civilian or soft power employs soft-power tools, such as diplomacy and the building of interdependence, rather than military confrontation (hard power). A normative power is one that attempts to diffuse/export the values and ideas on which it is founded upon to its surroundings.

2006). While the EU might occasionally incorporate the threat of sanctions, thereby using its trade and aid 'muscle' in pursuit of its multifarious objectives, the bottom line remains that the EU's ambition is to be a 'force for good' in world politics, seeking to advance its interests almost exclusively by non-military and 'soft' means (Wood, 2009: 113).

Scholars have attempted to understand the EU's actions and account for this allegedly normative role by focusing on the EU's unique nature. Unable to compare the EU with any other entity in the international system, Vogler (2003) concludes that it should be treated as *sui generis*. It is precisely as a result of its distinct historical evolution, its hybrid supranational-intergovernmental polity and its constitutional configuration that the EU is viewed as predisposed to act as a normative power in world affairs (Johansson-Nogués, 2007). Reinforcing and exporting the EU's normative character onto the world stage is an imperative process in the eyes of its officials, as it further augments the centrality of the EU as an international power, but also allows it 'to present and legitimate itself as being more than the sum of its parts' (Manners, 2002).

Sustainable development is one of the core norms that form part of the EU's normative outlook (Manners, 2008), but one that it is increasingly more eager to expand vis-à-vis the outside world, through its enlargement, environmental, trade, foreign and development policies (Falkner, 2007). The purpose of this paper is to investigate the notion of the EU as a normative power in an important emerging area of environmental diplomacy, namely biofuels regulation. Though a relatively recent policy area, biofuels have triggered one of the most highly contentious debates on the current international sustainability agenda, given their links to energy security,

transport, trade, food security and climate change concerns (see Steenberghen and Lòpez, 2008). Experts, NGOs and corporate actors are sharply divided concerning the sustainability of biofuels, resulting in a flood of literature highlighting this commodity's social, environmental and economic implications. European officials are nevertheless convinced as to the prospects of this renewable energy source for transport and have invested heavily in its promotion.

This paper examines the allegiance of the EU to the norm of sustainable development, as reflected through its efforts to promote and diffuse its position on biofuels sustainability. It will be argued that while the EU has been aspiring to integrate environmental thinking into every aspect of social, political and economic activity, the case of biofuels is nevertheless largely inconsistent with the thesis of the EU pursuing a normative external affairs agenda. It instead confirms the image of a large trading state seeking to protect its native biofuels industry, even if doing so entails promoting or subsidizing uneconomical and energy inefficient production. It is therefore concluded – sharing here Falkner's (2007: 520) viewpoint – that there is a need to always 'retain a critical perspective on any claim that power serves global interests and universal values'.

The remainder of this article is divided into three sections. Section 2 traces the historical evolution of the EU's attempts to promote biofuels in the common market. In section 3 we examine the implications for sustainable development (focusing in particular on its constituent dimensions) of the EU's biofuels policies. Section 4 argues that while Europe is a different international actor and does aspire to integrate sustainability concerns throughout all areas of foreign environmental policy, a more critical reading of the normative power argument is nevertheless

requisite. Supplementing this with an interest-based perspective on international environmental regulation offers a better understanding of the EU's emerging role as a global environmental leader, focusing in the case of this study on biofuels.

2. Emergence of EU biofuels policy

Climate change gained sudden political salience within EU quarters around the beginning of the 2000s, with the bulk of legislative activities to curb greenhouse gas (GHG) emissions dating back from that period (Kelly *et al*., 2010). A number of factors have supported the EU's desire to cultivate a leadership role in climate change governance. Firstly, the failure to adopt the European Constitution in 2005 signalled the need for new issues that could reinforce the legitimacy of the EU and reinvigorate the integration process. Given that abstract projects like 'better regulation' or the 'internal market' had proven uninspiring to Europe's citizens, climate change was brought into the fore as – in addition to appealing to strong public concerns – it could provide a catalyst towards Lisbon Strategy-related goals, such as 'spurring technological innovation, increasing energy security and creating jobs' (Jordan *et al*., 2010: 10).

Secondly, energy security concerns could also be addressed through the development of stringent climate policies. Interestingly, even this issue is viewed within the context of sustainable development. According to the Commission's 2006 Green Paper on energy, three core principles underpin Europe's energy strategy: *security* (availability of supply), *competitiveness* (referring to price affordability) and *sustainability* (an environmental dimension) (European Commission, 2006; Egenhofer *et al*., 2006). European interest in the promotion of

biofuels production is a relatively recent phenomenon, reflecting *inter alia* this increased EU preoccupation with energy security (European Commission, 2001a).

In 2001 the European Commission first identified biofuels as a key future energy source for transport, concerned mainly by the two key factors: first that the EU's transport system was almost entirely dependent on oil[2], originating mainly from Russia[3] and the politically unstable regions of the Middle East and Central Asia; and second that the EU was not progressing well in terms of meeting its Kyoto Protocol GHG emissions reduction target. Failure to implement the Kyoto treaty would not only constitute a major political embarrassment, given the centrality of climate change on the EU's sustainability agenda, but would also risk negating EU advances in environmentally sound practices in other areas.

In an effort to address these issues, the Commission in 2000 had set up the European Climate Change Programme (ECCP), the goal of which had been to develop recommendations on the most promising and cost-effective options that could enable the EU to meet its -8 percent Kyoto Protocol objective. By 2001, the ECCP had highlighted a number of important potential instruments, including a directive on biofuels.[4] In a direct response to the ECCP report, the Commission put forward plans aimed at promoting the use of renewable fuels in transport, with the promulgation of the Biofuels Directive in 2003 marking the first significant milestone in the development of a coherent EU policy in this field. Policy instruments promoting biofuels included domestic subsidization schemes, tax

[2] About 98 percent of transport consumption, representing 67 percent of final oil demand (see Commission, 2001b).
[3] Europe's concerns about energy security are centre stage following the 2006 and 2009 Russian energy-supply crises, which led to a partial or total suspension of Russian gas supplies to several EU member states. Central and Eastern European states were the hardest hit by the embargoes.
[4] See the Commission's ECCP webpage for more information: http://ec.europa.eu/clima/policies/eccp/index_en.htm

exemptions, Common Agricultural Policy (CAP[5]) provisions that directly encouraged biofuel feedstock production, plus funding for Research and Development (R&D) projects through the EU's Framework Programmes for Research and Technological Development. Notably, apart from climate change and energy security concerns, a key driver in most Member States for supporting biofuels relates precisely to prospects for rural development and employment (Di Lucia & Nilsson, 2007).

Under the 2003 Directive, Member States were required to meet a set of non-binding indicative targets of 2 percent by 2005 and 5.75 percent by 2010 for the inclusion of biofuels in petrol and diesel for transport (European Commission, 2003). The implementation of the Directive was nevertheless problematic at best, with biofuel consumption levels in 2005 reaching a mere 1 percent, of which Germany accounted for a staggering two-thirds (European Commission, 2007; Swinbank, 2009). With the exceptions of Germany, Sweden and Austria, the other Member States failed entirely to meet their 2005 reference values, with justifications for weak compliance on the part of their governments ranging from lack of agricultural land to national budget constraints and concern over the negative impact of biofuels on the environment (Di Lucia & Nilsson, 2007; ENDS Europe, 2005). In the view of Commission officials, the Directive needed urgent revision (European Commission, 2005), with binding targets being thought of as a much more suitable policy alternative (European Commission, 2007).

In the run-up to the 2007 climate change convention in Bali, Indonesia, the EU – in an effort to reinforce its climate leadership credentials – announced the

[5] Note that energy crop payment and the set-aside scheme were both abolished in 2010 (see Swinbank, 2009).

adoption of its 'energy and climate' package. Apart from focusing on emissions cuts, renewables and energy efficiency[6], the package also included a proposal on a mandatory 10 percent biofuels target to be reached by 2020. Following prolonged internal negotiations on the final shape of the actual legislation, the EU formally adopted the Renewable Energy Directive in April 2009. This Directive represents the EU's most ambitious to date attempt to boost the use of renewables among its Member States.

Unlike its predecessor, the 2009 Directive draws an explicit link between consumption of biofuels and their sustainable production. Public concern for potential negative impacts, coupled with widespread NGO criticism, has compelled the development of EU-wide standards and certification criteria to ensure a sustainable biofuels industry (see Genovesi, 2011). Besides GHG savings (currently 35 percent, rising to 50 percent in 2017), the EU's sustainability criteria stipulate that biofuel feedstock is not to be derived from primary forests, lands with high biodiversity value, protected territories and carbon-rich areas (European Commission, 2009b). Importantly, only domestically-produced or imported biofuels that meet the above criteria can be counted towards the EU's 10 percent target. In mid-2010, the Commission released detailed guidelines establishing *inter alia* the rules for the calculation method of land carbon stocks or for the recognition by the EU of voluntary certification schemes (see European Commission, 2010b; 2010c).[7]

[6] The known as Europe's 20-20-20 targets included a 20 percent cut in greenhouse gas emissions, a 20 percent increase in use of renewable energy and a 20 percent improvement in energy efficiency; all to be reached by 2020 (see European Commission, 2009a).

[7] The Commission is in the process of putting forward proposals by the end of 2012 aimed at extending the criteria for biofuels to solid biomass (see ENDS Europe, 2012b).

Biofuels certification is a response to concerns related to this commodity's sustainability and as a result, a number of relevant schemes and initiatives have emerged in the recent past (e.g. the RSB[8], the RTFO[9] or the RSPO[10]). A number of those have also developed standards for EU market access, intended to ensure compliance with the EU sustainability criteria (Scarlat & Dallemand, 2011). In addition, standardization organizations such as the European Committee for Standardization (CEN) and the International Organization for Standardization (ISO) have also recently announced their intention to follow suit and develop sustainability certification schemes of their own. In July 2011, the European Commission named the first seven biofuel certification schemes to win its approval (see ENDS Europe, 2011). Ensus, a UK biofuel sustainability certification scheme, is also expected to follow soon and secure approval by European authorities (Biofuels Digest, 2012).

Such technical (or non-tariff) barriers to trade have generally received a mixed response from the South. Brazil, on the one hand, is not adversely affected, given that ethanol from sugarcane is by far the most sustainably-produced biofuel worldwide, leading to GHG savings of up to 90 percent (Bomb *et al*., 2007; Goldemberg & Guardabassi, 2009; Souza, 2011). Yet, it has expressed dissatisfaction with various parameters of EU biofuels legislation, such as land type definitions (Lydgate, 2012).[11] On the other hand, Indonesia and Malaysia, fully aware of the link between tropical deforestation and palm oil production, are two actors hugely unenthusiastic about having to incur the cost necessary to meet

[8] Roundtable on Sustainable Biofuels
[9] Renewable Transport Fuels Obligation
[10] Roundtable on Sustainable Palm Oil
[11] While the Directive defines primary forests and natural protected areas, the Commission has yet to clarify what it considers as constituting highly biodiverse grasslands. Brazilian expansion of ethanol production is being planned to occur in ecosystems of biodiverse grasslands.

additional requirements. Both countries were actually contemplating filing a case to the World Trade Organization (WTO) against the EU for introducing sustainability criteria in the 2009 Directive, viewing them merely as protectionism in disguise to favour domestically-grown biofuel feedstocks (Junginger *et al*., 2011).

Nevertheless, some form of environmental assurance is imperative, as long as this proliferation of different and partially incompatible certification schemes does not negatively affect both sustainable development and trade. Stressing this point, a cautious approach should be taken to certification so as to ensure that it does not create an unclear situation for producers or raises unnecessary barriers to international biofuel trade (see Zah & Ruddy, 2009; Kaditi, 2009). Despite the drive for safety valves to ensure biofuels' sustainability, the environmental, social and economic concerns associated with biofuels production have not ceased, but instead intensified. The following section discusses the extent to which the EU has achieved the integration of all the dimensions of sustainable development while formulating its biofuels strategy.

3. Dimensions of Sustainable Development

The use of biofuels in the European market is becoming an increasingly controversial policy area, with the scale of the planned expansion – the 10 percent target to be reached by 2020 – giving rise to serious concerns as to whether it can be met in a sustainable fashion. The EU's response, namely the aforementioned criteria, has also become embroiled in intense debate, despite the criteria being the strictest worldwide to date.

Ensuring sustainability involves balancing seemingly conflicting needs across what is known as 'The Three Dimensions of Sustainability' (Gomar and Stringer, 2011). There is a need for development that takes into account the social needs of the population, the imperativeness of protecting the environment and conserving natural recourses, whilst also ensuring stable levels of economic growth and employment (Sobrino & Monroy, 2009). All three aspects are equally important in terms of sustainability and a balancing approach is therefore a *sine qua non*. Prioritizing is not an option, as doing so, Blackburn (2007) argues, is like asking, 'which is more important to human life: air, water, or food'?

Along these lines therefore, overcoming poverty by relying on the existing business-as-usual growth ideology is self-defeating, as mounting environmental costs will at some point negate any production benefits (Daly, 1996). Obsessively protecting the environment, thereby hampering economic growth in the process is also not an option (Sobrino & Monroy, 2009). Therefore, sustainability is, in essence, measured by the degree to which economic development takes into account ecological and social thresholds, that if surpassed, risk unravelling all three dimensions (Gomar and Stringer, 2011).

Interestingly, the EU in its 2001 Sustainable Development Strategy (SDS) has also formally recognized that striking a balance between environmental, social and economic objectives within the common market is a fundamental prerequisite of sustainable development. Yet, while the SDS acknowledges the necessity for 'difficult trade-offs' between the three dimensions, the EU has nevertheless been criticised for not putting into place precise guidance on how to actually make such 'balanced' decisions, as well as for neglecting the external repercussions (e.g. on

developing countries) of its internal policies (Adelle & Jordan, 2009: 114). In a similar tone, Pallemaerts (2006: 38) notes that the European Council has treated the annual review process of the SDS as a 'cursory, *pro forma* exercise', thus failing to seriously reflect on its purpose, scope and overall status with regards to EU sustainable development policymaking.

An increasing number of authors argue that the three dimension perspective on sustainability lacks continuity, as the focus is mainly on current activities, thus failing to take into account interactions among the 'short-, long-, and longer-term' (Lozano, 2008). Policy decisions nowadays generally have short time horizons, in the order of years rather than decades. Given though the complexity of ecosystems, coupled with scientific uncertainties on how these may be impacted in future times, policy decisions that lack a focus on time may result in irreversible consequences and thresholds being breached (see Adam, 1998; Kümmerer, 1996).

Since the term sustainable development means so many different things to so many different people and organizations, this study considers the time dimension through the way it is integrated in policymaking with a view to placing society on to a balanced, sustainable growth path. The next section applies the debate on sustainability dimensions to biofuels and offers an account of how exactly this commodity fares in terms of achieving the aforementioned delicate balance.

3.1 The 2009 Directive and the social dimension

Starting with the social dimension, the Directive does not in any way consider what the rapid expansion of biofuels markets might entail for the social needs and well-being of individuals in terms of food security, appropriate wages and working

conditions or land rights of smallholders and indigenous peoples (see Nuffield Council on Bioethics, 2011). European officials debated the adoption of such social criteria for quite some time, but eventually decided against doing so, given that such measures were considered to be incompatible with WTO provisions (European Commission, 2008; Lydgate, 2012; Swinbank, 2009).[12] The only socially-related commitment to be found in the Directive is an obligation on the part of the Commission to produce a biennial report on the impact of EU biofuels policies on social sustainability, 'the availability of foodstuffs at affordable prices' and 'land use rights' (Article 17). Notably enough though, five out of the seven recently recognized biofuel certification schemes do include requirements on social issues, thus allowing the EU to partially address – albeit indirectly – various social concerns associated with biofuels production.[13] In addition, EU officials are working on developing a list of voluntary criteria, aimed at addressing *inter alia* social sustainability concerns (European Commission, 2011).

Yet, the severity of biofuels-related social impacts that have been identified in developing countries over the years seems to necessitate far more stringent action (see Hall *et al*., 2009; Schaffel and La Rovere, 2010). To offer a few examples, widespread biofuel production could result in, or exacerbate, poor labour practices. Amnesty International has repeatedly reported that poor working conditions, health and safety risks, as well as child and forced labour are common practice in a number of biofuel-producing developing countries (see Nuffield Council on Bioethics,

[12] It should be noted that the EU – the region with the strictest and most expensive labour laws worldwide – had argued during the 1990s in favour of integrating social standards into WTO affairs. Nevertheless, it had to eventually back down due to the unwillingness of developing countries to permit the Union to enhance its competitiveness by exporting its laws to countries with lower standards (Van den Hoven, 2006).

[13] Only the Abengoa RED Bioenergy Sustainability Assurance (RBSA) and the Biomass Biofuels voluntary Schemes (2BSvs) do not include requirements on social issues.

2011). Land rights are another pressing concern, as so-called 'land grabs' by e.g. palm oil producers in Indonesia or Malaysia have been widely reported (see Nuffield Council on Bioethics, 2011). The unregulated expansion of agricultural land for production of biofuel feedstock could provoke conflicts over land rights, leading to the clearing of forestland or farmland and the displacement of indigenous tribes (Dufey, 2007). Actually, North European companies are eagerly buying massive tracts of land in Africa for the cultivation of biofuels, often paying little attention as to whether or not local people lose access to and control over lands and ecosystems on which their livelihoods depend (EUobserver, 2009; Matondi *et al*., 2011).

The greatest social concern regards the impact of increased biofuel production on food prices and production. The economic effects of large-scale biofuels production could involve serious ethical and social repercussions, as dedicating a sizable part of the harvest production to biofuels could potentially drive food prices up, therefore leading to starvation and urban riots. The literature is currently divided as to whether or not biofuels are to be held responsible for the alarming increases in food prices experienced between 2007 and mid-2008, which resulted in riots being sparked in Mexico, Haiti, Yemen, Zimbabwe and elsewhere. One group of authors (e.g. Pimentel *et al*., 2010; Searchinger *et al*., 2008; Banse *et al*., 2010; Gordon, 2008) argues that prices of agricultural products tend to increase as a direct outcome of enhanced biofuels consumption, whereas another group (e.g. Harvey & Pilgrim, 2011; Hira, 2011; Ajanovic, 2011; Cockerill & Martin, 2008) is of the view that other factors, such as *inter alia* the rise in the price of oil and fertilizers has had a more significant effect on food prices than any attributable to biofuels. Former EU Energy Commissioner Piebalgs (2009) joined the chorus by

dismissing many statements made on the relation between biofuels and food prices as 'out of proportion', arguing that the impact of European biofuels production on current global food prices was minimal. In any case, this 'food versus fuel' debate is still ongoing and will probably remain so for quite some time to come.

A potential solution to this controversy would be to invest in the development of so-called 2nd generation biofuels that are produced from a variety of inedible sources, such as woody crops, energy grasses, or even agricultural and forestry residues (SUNLIBB, 2012). In this respect, supporting the current 1st generation biofuels market is a first step in developing more sustainable and cost-effective second-generation biofuels (Baka & Roland-Holst, 2009). However, some scholars question whether stakeholders who have invested heavily in 1st generation biofuel production plants would be eager to shift to 2nd generation biofuels, thereby rendering unprofitable not just 1st generation feedstock cultivation, but also the entire production chain (Berndes *et al*., 2010).

Current policies to stimulate 2nd generation biofuels production, such as the 2009 Directive's provision that such biofuels can be double counted in the renewable transport fuels target of 10 percent, do not seem to have induced the robust development of conversion technologies for these biofuels. Business stakeholders participating in a 2011 biofuels event in Verona, Italy[14], argued that apart from the double-counting rule lacking industrial monetary value, the fact that Member States do not really rely on 2nd generation biofuels to meet part of their targets immensely reduces the rule's inventiveness.

[14] The Second International Conference on Lignocellulosic Ethanol (2ICLE), 11-13 October 2011.

3.2 The 2009 Directive and the environment dimension

Despite the sustainability criteria, the 2009 EU Directive fails to take into consideration a number of issues related to the threat biofuels might pose to the environment. For instance, large-scale biofuel production could trigger air, soil and water degradation, given the considerable amount of fertilizers and pesticides required by certain first-generation feedstocks (Charles *et al*., 2007). According to EU officials, the EU opted against including binding criteria on these issues in the Directive, as it would again be unable to justify such trade-distorting measures to the WTO (Lydgate, 2012). As a result, they were merely included in reporting and monitoring requirements under the Directive. In contrast, the inserted climate and biodiversity criteria might stand, as those relate to environmental issues of global concern that are recognized in international multilateral environmental agreements (MEAs) (Di Lucia, 2010).

While developing countries are particularly vulnerable to the direct and indirect undesired effects of biofuel production, Europe will also be affected. Of course, the fact that biofuel production in the Member States is subject to cross compliance rules specified under the EU's CAP – in essence a fourth criterion in the Directive (Article 17.6) – could ensure that the strain on the European environment is substantially relieved. Even so, Genovesi (2011) warns *inter alia* against the prospect of biological invasions, noting that due to high volumes of trade, Europe is a particularly prone area, with a plethora of unwanted weedy plants and alien pests having already established themselves in the continent during recent decades.

Among the greatest environmental concerns with biofuels production is that their increased use could cause considerable land use change (LUC), both direct

(dLUC) as well as indirect (iLUC).[15] The EU, while specifying mechanisms in the Directive for dealing with dLUC, has not as yet reached a final decision on how to address iLUC emissions in legislation. A 2010 communication, while acknowledging the urgency for immediate action, noted that the uncertainties associated with the available computer models for estimating iLUC impacts necessitated more time for the Commission to identify the most suitable policy approach on the matter (European Commission, 2010e).

Indeed, a scientific consensus as to how to monitor and control iLUC is currently lacking (Di Lucia, 2010; Chalmers *et al*., 2011; Fairley, 2011). Nevertheless, in the United States the revised Renewable Fuels Standard (RFS2) does include iLUC in its GHG emissions methodology, meaning that the EU needs to soon identify an effective approach to modelling iLUC, as well as come up with potential iLUC mitigation options. The EU was planning to come forward with a legislative proposal on iLUC during March 2012, but such plans did not eventually materialize due to disagreements within the Commission as to whether an iLUC factor should be introduced as a penalty for biofuels that are environmentally unsustainable (ENDS Europe, 2012a).

3.3 The 2009 Directive and the economy dimension

The imposition of tariffs and the institution of subsidies are the two main mechanisms governments generally tend to employ in order to foster the development of their national biofuels industry. As Hebebrand & Laney (2007)

[15] For a detailed description see Fehrenbach *et al*. (2008). In simple terms, if a farmer decides to grow biofuel feedstock on previously uncultivated land, this will cause dLUC. If the farmer uses existing agricultural land, this will mean that the crop that was previously cultivated there will now be displaced and will have to be moved elsewhere, e.g. to forest land, thus causing iLUC in the process.

note, policymakers can be very sensitive to the fact that domestic agricultural interests aspire to be the ones primarily profiting from ample incentives to increase biofuels production. The current high level of protectionism on the part of the EU is therefore to be expected, given that its main objective is to limit imports of biofuels in order to boost their production domestically (Bomb *et al.*, 2007; Hebebrand & Laney, 2007). Nevertheless, this approach scores badly on a number of fronts in terms of economic sustainability.

First, supporting domestic production through high tariffs entails hindering the entrance of biofuels from more competitive producers. Due to a combination of land availability, low cost/prices for agricultural crops, favourable climatic conditions and low-cost farm labour, a number of (mostly) tropical countries (e.g. Brazil) have a productive advantage when it comes to biofuels (Machado-Filho, 2008; Johnson & Virgin, 2010). Cost-wise, biodiesel and ethanol production in the EU is not profitable without substantial fiscal support. Ethanol production costs, including subsidies, are two and three times higher than in the US and Brazil respectively (Motaal, 2008). Paradoxically enough, even in biodiesel – where the EU is by far the world's leading producer – costs are higher compared to the US, not to mention Brazil (Motaal, 2008). Therefore, it is argued that biofuel imports from favourable climates could significantly promote the economic sustainability dimension of trade (Bomb *et al.*, 2007).

Second, apart from biofuels in Europe being heavily subsidized and thus produced way above the opportunity cost of the fossil fuels they replace, they are also far less energy efficient compared to their counterparts in tropical countries (Trindale, 2009). Around four-fifths of the demand for biofuel in the EU is met by

biodiesel, with over 80 percent of this production being derived from 'home grown' rapeseed, a feedstock considerably low in energy per hectare and in GHG savings (Harvey & Pilgrim, 2011). Biofuel energy efficiency depends on the type of the feedstock used, the cultivation methods employed and the conditions under which the crop is produced (Hira, 2011). When all these factors are taken into account, sugarcane ethanol from Brazil, for example, is recognized as both the most sustainable option currently available in the market, plus as the most price-competitive biofuel in the world (Afionis, 2010; Tan *et al*., 2008; Hall *et al*., 2009; Farinelli *et al*., 2009).

As a result, a number of analysts and scholars again argue in favour of the EU opening up its inefficient biodiesel-dominated market to ethanol producers from the South in order for the most energy efficient and sustainable biofuels to be promoted, regardless of their country origin (Hira, 2011; Trindale, 2009; Hebebrand & Laney, 2007; Bomb *et al*., 2007). Doing so is deemed a *sine qua non*, since – given the limited potential of energy crops in the industrial North – Europe will have no alternative but to heavily rely on imports if it is to reach its ambitious fuel substitution goals (Zah & Ruddy, 2009; Kaditi, 2009).

Third, apart from energy efficiency or international trade competitiveness, there exists also a developmental angle to this debate that needs to be highlighted. As an actor aspiring to normative leadership, the EU could not but be strongly committed to the Millennium Development Goals (MDGs).[16] According to EU policymakers, helping the world's most disadvantaged populations, eradicating

[16] The MDGs are eight targeted development aims designed to free humanity from extreme poverty, hunger, illiteracy and disease by 2015. They were adopted in September of 2000 during the Millennium Summit at United Nations headquarters in New York.

poverty and improving living conditions comprise top short-term priorities (European Commission, 2010d). Indeed, the EU provides more than half of worldwide development aid. In 2003, the then EU Environment Commissioner, Margot Wallstrom, noted that 'our credibility will suffer if […] our policies have detrimental impacts outside the EU, in particular on the development opportunities of the poorest countries' (in Adelle & Jordan, 2009). Yet, in the case of biofuels, the evidence seems to suggest that the EU is failing to live up to its rhetoric.

Strong protectionism on the part of the EU entails that those countries that are better suited to produce biofuels are actually prevented from fully benefiting from the surge in global demand for this commodity, thus undermining their potential for economic development and poverty reduction. Moreover, the prevailing tariff escalation systems[17] act as a stimulus to developing countries to prioritize exports of feedstock, such as unprocessed molasses or crude oils, thus allowing the importing industrialized countries to reap all the profits associated with final biofuel conversion (Dufey, 2007; Kaditi, 2009).[18] Farmers too are disadvantaged, as not only are they deprived of potential markets for their produce, but the little income they do laboriously manage to secure from export production is often miniscule compared to that of actors in upper parts of biofuels supply chains (Gordon, 2008; Dufey, 2007). A 'fairtrade' type of scheme, as proposed by the Nuffield Council on Bioethics (2011), could represent a potential solution.

[17] Tariff escalation occurs when an importing country protects its processing or manufacturing industry by applying higher duties to imports of finished products compared to those of unprocessed commodities or raw materials.

[18] As Kaditi (2009) notes, the EU, for instance, 'applies a 3.8 percent tariff on imports of crude palm oil, 9.0 percent on imports of refined palm oil and 10.9 percent on imports of stearin from Indonesia and Malaysia'.

3.4 The 2009 Directive and the time dimension

The 1987 Brundtland Report is generally considered the starting point for most current discussions on the concept of sustainable development (Lozano, 2008). Currently, there exists a plethora of competing definitions of this concept in the literature and debates have erupted between those scholars who prefer the three dimensions approach, or a more holistic perspective (emphasizing e.g. the relationship between the three dimensions and temporal aspects) (see Mebratu, 1998; Lozano, 2008 for overviews). As outlined earlier, factoring in the time dimension requires defining the priorities between short-term and long-term goals, choosing realistic time horizons, and dealing with uncertainty.

Biological phenomena are quite complex, their interactions span multiple temporal and spatial scales, that scientists have coined the term 'biocomplexity' to describe 'nonlinear, chaotic, or even unpredictable behaviours' (Michener *et al.*, 2001). Ecosystems are so convoluted, and the time periods required for the manifestation of changes in the system itself or its behaviour so long, that we cannot really count on scientific certainty to accurately predict the future effects on the environment, the society or the economy of the myriad technological products and substances manufactured by modern humankind (Kümmerer, 1996). For such cases of unknown risk, advocates of the time dimension propose the 'precautionary principle' (see Dovers, 1995). As Kümmerer (1996) notes, if there are suspicions about negative effects, then 'production should be decreased or halted altogether'. Strange & Bayley (2008: 132), argue that since no model or foresight can give us all the information we would want, policies and their goals need to be 'rigorous enough to be effective, but flexible enough to adapt as circumstances and priorities evolve'.

If this debate on temporality was to be applied to biofuels, many uncertainties surrounding them would straightaway be noticed, several of which have already been noted in the preceding sections. Starting with societal impacts, the exact impact of biofuels on food prices and production remains still a polarized debate. Equally unknown is the precise manner in which this sharp expansion of worldwide interest in transport biofuels will affect the livelihoods of smallholder farmers and their communities in developing countries (see Matondi *et al.*, 2011).

Turning to environmental uncertainties, scientific ambivalence on how to precisely measure iLUC has already been highlighted. A second example – and one that is especially illustrative of the complexities involved in greenhouse gas accounting – is the September 2011 opinion of the European Environment Agency (EEA), according to which the widely held assumption that biomass combustion is inherently 'carbon neutral' because it only 'releases carbon taken from the atmosphere during plant growth' is in fact incorrect (European Environment Agency, 2011: 1). Consequently, the EEA recommends that all EU policies and directives related to bioenergy should be comprehensively revised. The EEA's findings have been recently supported by Haberl *et al*. (forthcoming), who argue that burning biomass for energy purposes could actually increase the carbon in the air if, for example, the harvesting of the biomass leads to reductions in carbon sequestration.

Given the profusion of risks associated with biofuels, proponents of a more holistic approach to sustainability would opt in favour of the EU slowing down its efforts to increase biofuels consumption in the common market. Following an estimation of the overall global cropland that would be required to meet Germany's domestic biofuel consumption needs, Bringezu *et al*. (2009) propose that given the

serious implications for global land use and food security, Germany should reduce – rather than increase – its biofuel quotas and targets. A number of authors concur with such findings and maintain that given the dubiety of biofuels, governments should 'take their foot off the accelerator', so as to provide science ample time to fully evaluate the risks associated with biofuels (Florin & Bunting, 2009).

Arguing therefore along such lines, the pitfalls associated with biofuels render them an inappropriate answer to the climate crisis. In other words, over-hasty decision-making is not guided by advocating intra- or inter-generational interests, as it is simply unable to respond to the uncertainties and ignorance of long-term impacts of biofuels on the environment. As the UK government's climate change envoy J. Ashton pointedly noted: 'The policy on biofuels is currently running ahead of science' (in Florin & Bunting, 2009).

4. Sustainability leadership vs. interests?

Promoting a global sustainability agenda has been interpreted as evidence of the EU genuinely attempting to fulfil its role as a normative power in a successful and credible way (Baker, 2006; Groenleer & van Schaik, 2007). In this sense, European environmental leadership 'departs from the *realpolitik* tradition in foreign policy and promotes the global common good over and above the national interest' (Falkner, 2007).

However, such an interpretation of the EU's global green role is problematic, as it provides an incomplete picture of the forces driving European environmental policy. Falkner (2007) argues that viewing European foreign environmental policy through a political economy lens could greatly contribute towards developing a more

rounded understanding of the factors shaping an actor's position in controlling international ecological problems. In other words, what Falkner (2007: 521) means is that identity and economic interests need to be studied together as they are 'closely intertwined'.

A similar approach is adopted by Kelemen (2010), who argues that economic interests provide the main motivation for the EU taking on a leadership role in international environmental policymaking, with normative aspirations only playing a secondary or complementary role. According to his line of thinking, strong domestic electoral pressure since the 1990s has led several (mainly Northern) Member States and therefore the EU itself to adopt stringent environmental policies and standards on a plethora of issues. Subsequently, given the implications for European firms, it is in the competitive trade interests of the EU to champion international agreements that would result in other jurisdictions adopting environmental regulations of a comparative nature – much like the US had done in the 1970s and 1980s (Kelemen & Vogel, 2010).

Indeed, the normative power perspective with its focus on global interests and universal values would be largely unable to explain why an actor so keen on promoting the environmental sustainability of international biofuels trade, actually impedes imports of biofuels that are far more energy efficient compared to their heavily subsidized domestic counterparts. This inconsistency between the EU's support for universal norms and the reality of European protectionist actions seems to be explained best from an interest-based perspective.

The interest-based approach is a national-level explanation, focusing on the domestic factors influencing a country's position in the international environmental

arena. In order therefore to acquire a more comprehensive understanding of EU biofuels policy, European interest in environmental sustainability must be examined in conjunction with other policy objectives, namely those of economic and trade competitiveness. While Europe aspires to be a global environmental leader, sight should never be lost of the fact that it is above all the world's largest trading bloc, accounting for one fifth of global trade (DG Trade, 2009).

The EU's high tariffs placed on ethanol are a clear indication of its intent to limit imports, thereby shielding local EU production against cheap imports, mainly from Brazil. Interestingly enough, the Commission (2007: 7) frankly admits so in its 2007 Roadmap: 'From a trade perspective, the EU maintains significant import protection on some types of biofuels, notably ethanol which has a tariff protection level of around 45% *ad valorem*'. It then goes on to state that 'if it would appear that supply of sustainable biofuels to the EU is constrained, the EU should be ready to examine whether further market access would be an option to help the development of the market'.

This aforementioned option has been upheld by high-echelon EU officials, with former EU trade commissioner Mandelson stating in 2007 that 'we cannot contemplate favouring EU production of biofuels with a weak carbon performance if we can import cheaper, cleaner biofuels... . Resource nationalism doesn't serve us well' (in Hira, 2011: 6934). However, the lack of progress on relaxing tariffs is indicative of how trade concerns are prioritized in EU policymaking and how agricultural lobbyists have strategically positioned themselves in both the heart of the EU quarter in Brussels, as well as in Member States' capitals.

The current stalemate in the WTO Doha Development Round offers valuable insights into the manner Europe's normative power aspirations are superseded by more mainstream political concerns, in this case the need to protect domestic agricultural interests and safeguard the income of farmers. The WTO is the EU's arena of preference in which to deal with a wide range of issues relating to biofuels, such as liberalization of EU agricultural markets or biofuels classification.[19] It has insisted that bilateral or regional fora are inappropriate for dealing with such negotiations, thus stressing its preference for such deliberations to be conducted primarily within the multilateral framework of the WTO (Hardacre, 2010). Global agricultural trade liberalization talks nevertheless face a number of obstacles, such as the CAP, with the EU agri-business lobbying group having a crucial influence in the WTO forum, especially so when coupled with the equally powerful US agricultural lobby (Hardacre, 2010).

One of the Doha Round's expressed commitments is the gradual reduction - or even elimination - of 'tariffs and non-tariff barriers to environmental goods and services' (WTO, 2001). However, the main point of contention has since then centred on how exactly to define 'environmental goods and services' (Kaditi, 2009). Under the auspices of these negotiations, Brazil suggested in 2007 that biofuels be included in the list of environmental goods, a proposal categorically rejected by both the EU and the US on the grounds that not all types biofuels are by necessity sustainable (Josling *et al.*, 2010). Interestingly, this is arguably more of the case

[19] According to WTO rules, tariff bindings differ depending on whether a product is classified as an agricultural or an industrial good. Whereas ethanol is considered an agricultural product, biodiesel is regarded an industrial one. This is because products are classified based on their chemical composition and not on their potential use. Apart from receiving different tariff classifications, WTO rules are more flexible regarding size of subsidies allowed for agricultural products (see Motaal, 2008).

with regards to EU rapeseed biodiesel and US corn ethanol. In any case, if the Brazilian request were to be granted, the newly established low-tariff regime would severely undermine the regulatory ability of these two actors to protect their biofuels industries and agricultural sectors from lower-priced imports (Josling *et al*., 2010).

It is rather straightforward why the US has strongly resisted discussing biofuels trade liberalization and why it has not followed the EU in adopting sustainability standards for the production and consumption of biofuels at the international level. The US administration's primary interest in promoting biofuels is energy security. As noted earlier, whereas climate change and energy security are both seen by the EU as drivers of biofuels development, in the case of the US climate change mitigation is not part of the equation, especially so given the poor energy efficiency properties of its corn-based biofuels. That said, an advocate of the EU normative power thesis would struggle to account for the bloc's insistence to continue distorting international biofuels markets when there are cheaper and vastly more sustainable alternatives readily available.

5. Conclusion

This paper critically examined the stance of the EU in the field of biofuels policy and evaluated whether it has actively promoted policies that have furthered the norm of sustainable development, as would be expected of a normative power in global environmental politics. In particular, it investigated whether European authorities have taken into account the social, environmental, economic and temporal dimensions of sustainable development within their biofuel promotion strategy. Whereas Europe's approach was deemed clearly unsustainable from an economic, temporal and social angle, its efforts to preserve the environment should nevertheless

be complemented as noteworthy, notwithstanding that a great array of concerns needs still to be urgently addressed.

Current academic work on Europe's global role was then considered. To this effect, claims by a plethora of scholars that the EU is a 'normative power' in international relations were tested, using biofuels as a case study. While not dismissing that there are basic values (e.g. environmental) underlying the EU's regulatory approach towards biofuels, it was argued that an interest-based perspective could help acquire a more complete picture of how an actor's preferences concerning international environmental regulation are shaped.

Specifically, it was posited that despite Europe's normative power aspirations, the policy area of biofuels rather confirms the image of a large trading state, where trade competitiveness often receives higher ranking than environmental protection, thereby unbalancing sustainability. In other words, while the EU is keen on portraying itself as a global green leader, such ambitions are effectively circumscribed by the strategically more central priority of ensuring that the pursuit of the sustainable development model does not come at the expense of economic power (Vanden Brande, 2008). Political and economic realities therefore may well explain why despite the green leadership rhetoric, the results – implementation-wise – fail to match expectations.

In terms of overall significance, important lessons can be drawn from the biofuels case that could be readily applied to other cases of environmental diplomacy. In the climate change regime, for instance, the EU has been largely assigned the role of the 'leader' whereas the US that of the 'laggard'. However, there is no denying that favourable circumstances in relation to energy production,

manufacturing and consumption in Europe have given the EU a substantial head start in relation to other UNFCCC Annex I Parties.[20] Thus, taking into account political and economic parameters could provide valuable insights into why the EU, despite a general adherence to the principle of sustainable development, is acknowledged as a leader in certain fields (biosafety, climate) but not others (agriculture, fisheries) (Falkner, 2007).

Reasons aside, the EU has a positive track record of attempting to address European and global environmental issues. Yet, it is imperative that the EU gives equal weight to the 'internal' as well as the 'external' repercussions of its sustainability legislation. If its policies, such as in energy, trade, fisheries or agricultural, result in problems simply being 'exported' to other countries, then these policies are not genuinely sustainable in any sense. Remedial action could include the adoption of a policy instrument of a similar nature to the 2001 SDS, followed this time by a strong commitment to its implementation. Apart from dealing with all the dimensions of sustainable development in a mutually reinforcing manner, it is imperative that impacts on the developing world are also factored in.

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[20] To offer but one example, the selection of the year 1990 as baseline in the Kyoto Protocol and the permission to fulfil its obligations as a 'bubble' allowed the EU to substantially benefit from emission reductions in Germany and the UK that were unrelated to climate policy and would thus have occurred anyway (see Afionis, 2011).

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