

EU BIOFUELS POLICY—RAISING THE QUESTION OF WTO COMPATIBILITY

I. INTRODUCTION

Governments intervene in the energy sector using a variety of measures to pursue a range of objectives, from security of supply and energy efficiency to environmental protection. Recent concerns about the impact of fossil fuels on climate change have resulted in the increasing promotion of biofuels as an alternative to oil. While worries exist with regard to the environmental impact of biofuel production in ecologically sensitive areas, it has been argued that with an effective regulatory framework to promote sustainable production, biofuels could provide a mechanism to provide energy security in an environmentally positive way.¹ The interest of the European Union (EU) in the promotion of biofuels production is a relatively recent phenomenon and it is now the world's largest producer of biodiesel and the fourth largest producer of bioethanol. At its most basic level, the promotion of biofuels as an alternative to fossil fuels is part of a wider EU effort to support the use of renewable energy. The promotion of renewable energy is traceable to a number of goals, a central one of which is ensuring security of energy supply.² Other policy goals supported by the promotion of renewable energies include reducing greenhouse gas emissions associated with climate change, decreasing dependence upon imported oil, the promotion of technological development as well as regional and rural development and employment.³

This paper will examine the extent to which EU Biofuels Policy may be constrained by and treated under current WTO disciplines. The discussion will commence by examining the current EU policy regarding the promotion of biofuels as an alternative to fossil fuels before turning to the more pertinent question of how the rules of the WTO interplay with this policy. In this regard, particular emphasis will be placed on the WTO rules on subsidies and non-discrimination. Consideration of the latter is especially important given the recent introduction of 'sustainability criteria' into EU Biofuels Policy as part of its response to the problems posed by climate change. The final section offers some tentative conclusions on the likely compliance of the EU's Biofuels Policy with WTO legal disciplines.

II. EMERGENCE OF EU BIOFUELS POLICY

The first significant milestone in the development of a coherent EU policy on biofuels was the promulgation of Directive 2003/30, the Biofuels Directive, which aimed to

¹ S Switzer, *International Trade Law and the Environment: Designing a Legal Framework to Curtail the Import of Unsustainability Produced Biofuels* (2007) 7 University College Dublin Law Review.

² See for example Commission (EC) 'An Energy Policy for Europe' (Communication) COM(2007) 1 final, 10 January 2007, 11.

³ See the Preamble of European Parliament and Council Directive (EC) 2009/28 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC [2009] OJ L 140/16.

promote the use of biofuels and other renewable fuels for transport.⁴ An indicative, non-binding, target of 5.75 per cent for the inclusion of biofuels in petrol and diesel for transport was set for all Member States to achieve by 2010.⁵ The results of the Biofuels Directive were somewhat mixed and early in 2006, the Commission published a detailed *EU Strategy for Biofuels*, paving the way for the development of a more mature EU policy on biofuels.⁶ A further publication in 2007, the *Renewable Energy Road Map*, proposed a target of 20 per cent for the use of renewable energy and 10 per cent for the share of biofuels in the transport sector by 2020.⁷ The latter target would be binding. A central component of the reform process envisaged by the Renewable Energy Road Map was the institution of an obligation upon fuel suppliers to reduce the greenhouse gas emissions of their fuel by 10 per cent.⁸ Biofuels were noted as a potential mechanism through which lifetime emissions could be reduced and accordingly, the creation of a separate fuel blend was proposed to allow higher percentages of biofuels to be used in petrol and diesel. A further Commission document⁹ proposed the amendment of Directive 98/70, which set EU-wide minimum health and environmental standards for petrol and diesel fuels.¹⁰

The development of a more mature approach in EU Biofuels policy was cemented with the publication by the Commission in January 2007 of an *Energy Policy for Europe* which sought to deal with issues of energy, industrial development and climate change more holistically.¹¹ In March 2007, the European Council accepted the Commission's proposal of a binding target for a 20 per cent share of renewables in EU-wide energy consumption by 2020 and endorsed a binding 10 per cent minimum target for all Member States in relation to the share of biofuels in petrol and diesel for transport.¹² The introduction of a *binding* biofuel mandate was subject to 'production being sustainable, second-generation biofuels becoming commercially available and the Fuel Quality Directive being amended to allow for adequate levels of blending.'¹³

⁴ European Parliament and Council Directive (EC) 2003/30 on the promotion of the use of Biofuels or other renewable fuels for transport [2003] OJ (2003) L123/42. Note however that as early as 1998 the European Parliament issued a resolution calling for the market share of biofuels to be increased to 2 per cent over a five year period through a range of measures such as tax exemptions and other market interventions; 8 June 1998 [1998] OJ C 210/219.

⁵ *ibid* art 3 (1) (b) (ii).

⁶ Commission (EC) 'An EU Strategy for Biofuels' (Communication) COM(2006) 34 final, 8 February 2006.

⁷ Commission (EC) 'Renewable Energy Road Map: Renewable energies in the 21st century: building a more sustainable future' (Communication) COM(2006) 848 final, 10 January 2007.

⁸ *ibid* 10.

⁹ Commission (EC) 'Proposal for a Directive of the European amending Directive 98/70/EC as regards the specification of petrol, diesel and gas-oil and introducing a mechanism to monitor and the introduction of a mechanism to monitor and reduce greenhouse gas emissions from the use of road transport fuels and amending Council Directive 1999/32/EC, as regards the specification of fuel used by inland waterway vessels and repealing Directive 93/12/EEC' COM(2007) 18 final, 31 January 2007.

¹⁰ European Parliament and Council Directive (EC) 98/70 relating to the quality of petrol and diesel fuels and amending Council Directive 93/12/EC [1998] OJ L350.

¹¹ Commission (n 2).

¹² Council of the European Union (EU) 'Presidency Conclusions—Brussels 8/9 March 2007' 2 May 2007; p 21.

¹³ *ibid*.

The imposition of a binding target for the use of biofuels in the transport sector was thought to be justifiable on a number of different bases, including the ease with which transport fuels may be traded between Member States. Thus if domestic production was unable to keep pace with demand, fuels could be imported from other Member States and/or from third countries.¹⁴ An additional justification for the imposition of binding targets was offered by reference to the need to provide investors with certainty and offer an enabling environment for continued technological development for renewable energy more generally.¹⁵

In January 2008, the Commission produced an ambitious draft Directive on the promotion of renewable energy and discussions throughout 2008 emphasized the need to develop effective sustainability standards for biofuels as well as the need to reflect on the link between biofuels and food security.¹⁶ The resultant Renewable Energy Directive, Directive 2009/28, was formally adopted in April 2009¹⁷ and mandates that a 20 per cent share of final energy consumption in the EU must come from renewable sources by 2020 with each Member State's contribution differentiated in accordance with their respective starting points.¹⁸ The Directive also mandates that a 10 per cent share for renewables in the transport sector is achieved with considerable emphasis placed upon the role of biofuels in meeting this target.¹⁹

Biofuels²⁰ and bioliquids²¹ used to meet targets set out in the Directive are required to adhere to certain sustainability standards. Compliance with these standards is also required so as to be eligible for 'financial support' and for measuring compliance with national targets.²² The core sustainability criterion established under the Directive

¹⁴ European Parliament and Council Directive (EC) 2009/28 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC [2009] OJ L 140/16; preamble para 16.

¹⁵ *ibid* preamble para 14. The Commission is tasked to monitor the supply of biofuels to the Community market in an effort to achieve an appropriate equilibrium between imported and domestic supply.

¹⁶ Commission (EC) 'Proposal for a Directive on the promotion of the use of energy from renewable sources' (Communication) COM(2008) 19 final, 23 January 2008.

¹⁷ European Parliament and Council Directive (EC) 2009/28 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC [2009] OJ L 140/16.

¹⁸ Annex I of the Directive contains national overall targets for each Member State's share of energy from renewable sources which, taken together will secure a share of 20% of final energy consumption of renewables by 2020.

¹⁹ Hydrogen and renewable electricity are the other forms of renewable energy likely to be used to meet the 10 per cent target.

²⁰ Biofuels are defined within the EC Renewable Energy Directive 2009/28, art 2 as 'liquid or gaseous fuel for transport produced from biomass.'

²¹ Within the context of the EC Renewable Energy Directive, the phrase bioliquids refers to liquid fuel from biomass for purposes other than transport; art 2. Given that the regime applicable to both biofuels and bioliquids is essentially identical, for the sake of convenience, the term biofuels will be used throughout this article.

²² The requirement that only 'sustainable' biofuels may be used to meet national targets is in line with the 2005 Biomass Action Plan which recommended that 'only biofuels whose cultivation complies with minimum sustainability standards will count towards the targets'; Commission (EC) 'Biomass Action Plan' (Communication) COM(2005) 628 final, 7 December 2005. See generally EC Renewable Energy Directive 2009/28; art 17 (1).

requires biofuels to achieve a minimum level of 35 per cent greenhouse gas savings.²³ This figure is set to increase to 50 per cent in 2017.²⁴ The Directive sets out a procedure for the calculation of *actual* greenhouse gas emission *savings* of biofuels and bioliquids.²⁵ The prescribed methodology sets out that the greenhouse gas emissions from the production and use of transport fuels, biofuels and bioliquids should first be calculated as a value of grams of CO₂ per Mega Joules [MJ] of fuel. This figure is then subtracted from the value of total emissions of an equivalent fossil fuel comparator [E_F].²⁶ The resulting sum is then divided by E_F .²⁷ For biofuels made from certain raw materials, however, the use of default values is permitted.²⁸ The use of such values is subject to a reporting obligation and the Commission is explicitly directed to review the impact of indirect land-use change on greenhouse gas emissions.²⁹

A further list of sustainability criteria is then provided; the first of which is that raw materials used to produce biofuels should not be obtained from land with *high biodiversity* value.³⁰ A number of indications are provided as to the areas which are likely to be considered as 'highly diverse' including primary forests and other wooded land where there is no indication of human activity as well as areas designated for nature protection purposes. As outlined in the Directive, raw materials taken from areas for the protection of rare, threatened or endangered eco-systems are also not permitted to be taken into account for the purposes of meeting the targets or receiving financial support. An exception is however provided for material taken from land in relation to which it can be shown that the production of biofuel feedstocks did not interfere with conservation efforts. Raw materials taken from highly diverse grassland are also prevented from being used to meet the targets set out in the Directive.³¹ The sustainability standards established by the Renewable Energy Directive also seek to discourage the use of 'high-carbon-stock lands' such as wetlands and continuously forested areas to produce biofuel feedstocks.³² Peatlands are additionally singled out as deserving of special attention due to their high carbon value and as such, raw materials derived from such areas will not be deemed to conform to the Directive's sustainability criteria

²³ EC Renewable Energy Directive 2009/28; art 17 (2). Note that in respect of 'biofuels and bioliquids produced from waste and residues, other than agricultural, aquaculture, fisheries and forestry residues,' the GHG saving requirement is the only sustainability criterion applicable; art 17 (1). It should also be noted that pursuant to art 21 (2) of the EC Renewable Energy Directive, 'biofuels [used for transportation purposes listed in art 3 (4)] produced from wastes, residues, non-food cellulosic material, and ligno-cellulosic material shall be considered to be twice that made by other biofuels.'

²⁴ *ibid*; in fact, the figure is more complicated than this in that 'from 1 January 2018 that greenhouse gas emission saving shall be at least 60% for biofuels and bioliquids produced in installations in which production started on or after 1 January 2017.'

²⁵ *ibid* art 19 and Annex V.

²⁶ The fossil fuel comparator is the latest 'available actual average emissions from the fossil part of petrol and diesel consumed in the Community as reported under Directive 98/70/EC. If no such data are available, the value used shall be 83,8 gCO₂eq/MJ'; *ibid*, Annex V, para 19.

²⁷ Expressed as $(E_F - E_B)/E_F$; *ibid*, Annex V, para 4.

²⁸ *ibid* art 19 (3); the use of default values is permitted for raw material cultivated outside the EU, raw materials in the form of waste or residues other than agricultural and fisheries as well as raw materials produced from Community lands listed as being those where the typical greenhouse gas emissions from cultivation of such materials can be expected to be lower or equal to set default values listed in part D of Annex V of the Directive.

³⁰ *ibid* art 17 (3).

³¹ *ibid*.

³² *ibid* art 19 (4).

unless it can be proved that production of the material did not result in the drainage of previously undrained areas.³³

The sustainability criteria apply regardless of whether the raw material is imported or domestically produced.³⁴ In the case of domestically produced feedstocks, however, producers are required additionally to adhere to a set of standards relating to good agricultural and environmental practices.³⁵ Ensuring compliance with the designated sustainability criteria is a matter for Member States who are tasked to require economic operators to show that the sustainability standards have been adhered to.³⁶ To this end, Member States are mandated to ensure that economic operators submit reliable data setting out their adherence to the designated criteria.³⁷ Member States are not permitted to require economic operators to adhere to additional criteria.³⁸ In verifying compliance with the sustainability criteria, the Directive mandates economic operators to adopt a ‘mass balance’ system.³⁹ Under this system biomass feedstocks are partly traceable to their source.⁴⁰ Further to this, the Commission is tasked to monitor and report on the effectiveness of a mass balance system in maintaining the integrity of the

³³ *ibid* art 17 (5).

³⁴ *ibid* art 17 (1).

³⁵ *ibid* art 17 (6); ‘Agricultural raw materials cultivated in the Community and used for the production of biofuels and bioliquids taken into account for the purposes referred to in points (a), (b) and (c) of paragraph 1 shall be obtained in accordance with the requirements and standards under the provisions referred to under the heading ‘Environment’ in part A and in point 9 of Annex II to Council Regulation 73/2009 establishing common rules for direct support schemes for farmers under the common agricultural policy and establishing certain support schemes for farmers; OJ (2009) L 30/16 and in accordance with the minimum requirements for good agricultural and environmental condition defined pursuant to Article 6(1) of that Regulation.’

³⁶ *ibid* art 18 (1); in this regard, Member States are required to produce a National Action Plan detailing the strategy they will adopt to fulfil the sustainability criteria for biofuels and bioliquids as well as verify compliance with the scheme. Guidance upon this is provided in Commission Decision (EC) 2009/548 establishing a template for National Renewable Energy Action Plans under Directive 2009/28/EC of the European Parliament and of the Council [2009] OJ L 182/33. A helpful summary of the content of Member States’ National Renewable Energy Action Plans is contained in Commission (EU) ‘Communication from the Commission to the European Parliament and the Council – Renewable Energy: Progressing towards the 2020 target’ [2011] COM(2011) 31 final. See also Commission Decision (EU) of 12 January 2011 on certain types of information about biofuels and bioliquids to be submitted by economic operators to Member States [2011] OJ L 9/11.

³⁷ EC Renewable Energy Directive 2009/28; art 18 (3)—compliance with a Commission recognized ‘voluntary scheme’ or multilateral/bilateral agreement will also suffice; see art 18 (4) and art 18 (7). Where such compliance is shown, Member States are not allowed to require further evidence of compliance to be provided; Art 18 (7). On voluntary schemes, see generally Commission (EU) ‘Communication from the Commission on voluntary schemes and default values in the EU biofuels and bioliquids sustainability scheme’ [2010] C 160/1.

³⁸ Hence, while other standards may be included in recognised sustainability schemes, these may not be used for the purposes of refusing a biofuel which meets the sustainability criteria outlined in the Renewable Energy Directive; Commission Communication *ibid*, p 2. Note however that economic operators *are* required to report on other issues such as soil, water and air protection; EC Renewable Energy Directive 2009/28; art 18 (3).

³⁹ EC Renewable Energy Directive 2009/28; art 18 (1).

⁴⁰ Cramer Commission Report ‘Testing Framework for Sustainable Biomass’ (2006) Final Report for the Project Group ‘Sustainable Production of Biomass’ available at http://www.lowcvp.org.uk/assets/reports/070427-Cramer-FinalReport_EN.pdf, accessed 6 February 2010) 26; see also EC Renewable Energy Directive 2009/28; art 18 (1).

verification system.⁴¹ Identical sustainability criteria have also been included within the auspices of the newly amended Fuel Quality Directive in order to prevent double reporting.⁴²

The introduction of sustainability requirements is noteworthy not so much for which factors are considered as ‘deserving’ of protection under such a scheme but rather for which concerns are left out. Social issues such as labour and land use rights are not included within the auspices of the sustainability scheme and, more crucially, the impact of biofuel production upon food prices is merely to be monitored.⁴³ In this regard, while the Commission is designated to propose corrective action if evidence shows that biofuel production has a ‘significant impact’ on food prices, no guidance is provided as to the meaning of ‘significant’ or the types of corrective action envisaged.⁴⁴ In addition, while concern for social, water and air protection as well as indirect land-use changes, restoration of degraded land and the avoidance of excessive water consumption are mentioned within the Directive, they are not ‘operationalised’ through the introduction of specific criteria but instead form a component of [future] reporting requirements imposed upon the Commission.⁴⁵ Interesting questions arise about the WTO compatibility of the sustainability criteria but before addressing these, this work turns to examine the use of subsidies by the EU to promote biofuels production.

III. SUBSIDIES AND BIOFUELS

Governments generally tend to support nascent domestic biofuel industries through two mechanisms; border protection (mainly through the imposition of import tariffs) and the institution of subsidies to support domestic production.⁴⁶ Under the EU Biofuels Policy, each Member State has a certain degree of discretion with regard to how to meet its targets for renewable energy use.⁴⁷ However, certain measures of support are relatively uniform across the EU-27. Article 2(k) of the Renewable Energy Directive indicates that a support scheme for renewable energy (including biofuels) includes any instrument, scheme or mechanism applied by a Member State or a group

⁴¹ *ibid* art 18(2). In this regard, see Commission (EU) Report on the operation of the mass balance verification method for the biofuels and bioliquids sustainability scheme in accordance with Article 18(2) of Directive 2009/28/EC (Staff Working Document) SEC(2011) 129 final and Commission (EU) ‘Communication from the Commission to the European Parliament and the Council—Renewable Energy: Progressing towards the 2020 target’ [2011] COM(2011) 31 final.

⁴² European Parliament and Council Directive (EC) 2009/30 amending Directive 98/70/EC as regards the specification of petrol, diesel and gas-oil and introducing a mechanism to monitor and reduce greenhouse gas emissions and amending Council Directive 1999/32/EC as regards the specification of fuel used by inland waterway vessels and repealing Directive 93/12/EEC [2009] OJ L 140/88.

⁴³ Such criteria are merely to be reported on and are hence not part of the binding sustainability norms mandated under the Directive.

⁴⁴ See generally EC Renewable Energy Directive 2009/28; art 17 (7). ⁴⁵ *ibid* art 23.

⁴⁶ R Doornbosch and R Steenblik ‘Biofuels: Is the Cure Worse than the Disease?’ (2007) OECD SG/SD/RT, 25.

⁴⁷ Subject to single market disciplines such as the rules on state aid etc. Note however that the recent 2008 ‘State Aid’ scoreboard produced by the Commission details that the overwhelming majority [in the region of 98%] of aid granted by states for environmental purposes was found to be consistent with applicable state aid rules; Commission ‘State aid Scoreboard—Spring 2008 Update’ (Report) COM(2008) 304 final, 21 May 2008, p 21.

of Member States, that promotes the use of energy from renewable sources by reducing the cost of that energy, increasing the price at which it can be sold, or increasing, by means of a renewable energy obligation or otherwise, the volume of such energy purchased.⁴⁸ This section will concentrate upon these measures of support explicitly mentioned in the Renewable Energy Directive as being permissible for Member States to put in place to promote biofuels. The aim of this section is to explore the likely compatibility of these more common EU support measures with WTO legal disciplines.

The two main WTO legal disciplines applicable to subsidies provided by Members are the Agreement on Agriculture and the Agreement on Subsidies and Countervailing Measures.⁴⁹ The first issue here is the tariff classification of biofuels as this will help to determine the relevant law. If a product is classified as an agricultural product, that is it falls within Chapters 1–24 of the Harmonised System of Tariff Classification (Harmonised System), it will be considered under the Agreement on Agriculture before being considered under the Subsidies Agreement, as the former includes disciplines on the use of subsidies specific to agricultural products.⁵⁰ An immediate problem here is that there is no distinct tariff classification for biofuels. Ethanol, for example, has been classified as falling under Chapter 22 of the Harmonised System. As a result, subsidies for biofuel produced from ethanol may be considered under the Agreement on Agriculture before being considered under the Subsidies Agreement. In contrast, biodiesel has been classified under Chapter 38 of the Harmonised System so is an industrial product and thus governed by the Subsidies Agreement. However, as biodiesel within the EU is largely the result of the processing of rapeseed, an agricultural product, an argument could be made that such subsidies should also be considered under the Agreement on Agriculture before being considered under the more general Subsidies Agreement.

⁴⁸ The Directive provides that the support offered includes: ‘... but is not restricted to, investment aid, tax exemptions or reductions, tax refunds, renewable energy obligation support schemes including those using green energy certificates, and direct price support schemes including feed-in tariffs and premium payments.’ For details on the EU framework for the taxation of energy products and electricity relevant to biofuel support, see Council Directive (EC) 2003/96 restructuring the Community framework for the taxation of energy products and electricity [2003] OJ L 283/51 [as amended]. See also Council Directive 2008/118/EC of 16 December 2008 concerning the general arrangements for excise duty and applicable to the taxation of energy products and electricity; 2008/118/EC.

⁴⁹ The WTO Agreement on Agriculture, April 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1A, The Legal Texts: The Results of the Uruguay Round of Multilateral Trade Negotiations 33 (1999), 1867 UNTS 410 [hereinafter WTO Agreement on Agriculture] Agreement on Subsidies and Countervailing Measures, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1A, The Legal Texts: The Results of the Uruguay Round Of Multilateral Trade Negotiations 275 (1999), 1867 UNTS 14 [hereinafter WTO Subsidies Agreement].

⁵⁰ Under the terms of the Peace Clause agricultural subsidies could not be challenged under the Subsidies Agreement but the Peace Clause has now expired, see art 13 of the Agreement on Agriculture. On this point, see D Chambovey ‘How the Expiry of the Peace Clause (art 13 of the WTO Agreement on Agriculture) Might Alter Disciplines on Agricultural Subsidies in the WTO Framework’ (2002) 36 *Journal of World Trade* 305, D Morgan and G Goh ‘Peace in Our Time? An Analysis of Article 13 of the Agreement on Agriculture’ (2003) 37 *Journal of World Trade* 977 and R Steinberg and T Josling, ‘When the Peace Ends: The Vulnerability of EC and US Agricultural Subsidies to WTO Legal Challenge’ (2003) 6 *Journal of International Economic Law* 369.

A. Agreement on Agriculture

The WTO Agreement on Agriculture seeks to control ‘the annual level of support, expressed in monetary terms, provided for an agricultural product in favour of producers of the basic agricultural product or non-product-specific support provided in favour of agricultural producers.’⁵¹ This calculation, referred to as the Aggregate Measurement of Support (AMS), provides the basis for the reduction commitments under the Agreement. The detailed rules for the AMS calculation are provided in Annex 3 of the Agreement and these make it clear that ‘measures directed at agricultural processors shall be included to the extent that such measures benefit producers of the basic agricultural product.’ The AMS is subject to reduction over the duration of the Agreement, as is support provided under production-limiting programmes classified under the Blue Box.⁵² Annex 2 of the Agreement exempts what are referred to as Green Box measures, provided that the support provided ‘shall meet the fundamental requirement that they have no, or at most minimal, trade distortion effects or effects on production.’⁵³ There is an obligation that the support is provided through a publicly-funded government programme and that such support should ‘not have the effect of providing price support to producers.’

It is important to know how to classify support given to feedstock producers in the EU in order to assess whether such support is compatible with the Agreement on Agriculture. The Energy Crop Payment was notified under the Blue Box of the Agreement and the use of set-aside land to support biofuels production could have come under the Green Box. However, following the CAP Health Check, both the Energy Crop Payment and the set-aside scheme have been abolished as from 2010.⁵⁴ With the removal of such schemes, support under the CAP for the cultivation of biofuel feedstocks will instead be structured under the Rural Development pillar.⁵⁵ The decoupling of support from production is part of a trend within recent reforms of the CAP to move agricultural support provided under the terms of the Agreement on Agriculture

⁵¹ Art 1(a) of the WTO Agreement on Agriculture.

⁵² Provided under art 6 of the WTO Agreement on Agriculture, the Blue Box exempts from the reduction commitments subsidies involving direct payments under production-limiting programmes provided that they are based on fixed areas and yields, or on 85 percent or less of the base level of production or, in the case of livestock payments, on a fixed number of head. Payments under such programmes need not be decoupled from production.

⁵³ See for example, D Blandford ‘Are Disciplines Required on Domestic Support’ (2001) 2 *Estey Centre Journal of International Law and Trade Policy* 35 and J Rude ‘Under the Green Box: The WTO and Farm Subsidies’ (2001) 35 *Journal of World Trade* 1015.

⁵⁴ The expiration of the energy crop payment is confirmed by Council Regulation (EC) 73/2009 establishing common rules for direct support schemes for farmers under the common agricultural policy and establishing certain support schemes for farmers, amending Regulations (EC) No 1290/2005, (EC) No 247/2006, (EC) No 378/2007 and repealing Regulation (EC) No 1782/2003 [2009] OJ L 30/16 Art 146. For a discussion of the impact of the energy crop payment, see Commission (EC) ‘Proposal for a Council Regulation on modifications to the common agricultural policy by amending Regulations (EC) No 320/2006, (EC) No 1234/2007, (EC) No 3/2008 and (EC) No [...]/2008’ (Communication) COM (2008) 306, 20 May 2009.

⁵⁵ See Council Regulation (EC) 74/2009 amending Regulation (EC) No 1698/2005 on support for rural development by the European Agricultural Fund for Rural Development (EAFRD) [2009] OJ L 30/100.

from the Blue Box, which is subject to reduction commitments, to the Green Box, which is not subject to such commitments.⁵⁶

This is not to say that there are no disciplines associated with the Green Box. Paragraphs 5 to 13 of Annex 2 allow for various direct payments to producers to be exempt from the reduction commitment, provided the basic criteria laid down in paragraph 1 plus the specific criteria applicable to the individual payment are satisfied. If a particular payment is not specified in these paragraphs, it can still be exempt from the reduction commitment provided the general criteria of paragraph 1 are satisfied and the criteria of paragraph 6 (b)–(e) are also satisfied. Under these paragraphs, the amount of payment in any given year is not related to, or based on, the type or volume of production undertaken by the producer, the prices (domestic or international) applying to any production undertaken, or the factors of production employed, in any year after the base period. With changes to the set-aside scheme, the EU can no longer rely on paragraph 10 of the Green Box (Structural Adjustment—removing land from marketable agricultural production) or Paragraph 12 (Environmental Programmes). This leaves only Paragraph 13 of Annex 2, payments under regional assistance programmes, as a potential justification for biofuel subsidies.

Under Regulation 74/2009, support will be available under Axis 1 (Improving the competitiveness of the agricultural and forestry sector) and Axis 3 (Quality of life in rural areas and diversification of the rural economy).⁵⁷ To qualify under the Green Box, paragraph 13 limits eligibility for such payments to producers in ‘disadvantaged regions’, that is, ‘a clearly designated contiguous geographical area with a definable economic and administrative identity, considered as disadvantaged on the basis of neutral and objective criteria clearly spelt out in law or regulation and indicating that the region’s difficulties arise out of more than temporary circumstances.’ Payments, which would only be available to producers in these regions, cannot be related to, or based on, the type or volume of production or the prices applying to any production, undertaken in any year after the base period and are limited to the extra costs or loss of income involved in undertaking agricultural production in the region. It appears doubtful whether paragraph 13 would provide a sufficient basis for the provision of biofuel subsidies under the Agreement on Agriculture. As a result paragraphs 6 (b) to (e) will apply and the general criteria in paragraph 1 of Annex 2 will apply. Article 7 of the Agreement on Agriculture provides that it is up to each Member to ensure the conformity of domestic support measures with the provisions of Annex 2. In the event that a measure is shown not to satisfy the criteria in Annex 2 it will become subject to inclusion in the Member’s total AMS. There is no jurisprudence interpreting article 7 and very limited jurisprudence interpreting Annex 2. If the subsidies to biofuel

⁵⁶ It is to be regretted that in *US–Upland Cotton* the Panel eschewed a definition of this fundamental requirement in Annex 2 as not being necessary given its finding that there was a breach of one of subsequent paragraphs of the Annex; WTO, *United States: Subsidies on Upland Cotton – Report of the Panel* (18 September 2004) WT/DS267/R.

⁵⁷ See Council Regulation (EC) 1698/2005 on support for rural development by the European Agricultural Fund for Rural Development [2005] OJ L 277/1 as amended by Regulation 74/2009. The measures supported Axis 1 include those under art 26, modernisation of agricultural holdings and Art 28, adding value to agricultural and forestry products. Those supported under Axis 3 include those under art 53, diversification into non-agricultural activities, art 54, support for business creation and development and art 56, basic services for the economy and rural population.

production are not covered by the Agreement on Agriculture, they will be subject to the disciplines of the Subsidies Agreement.

B. Subsidies Agreement

The WTO Subsidies Agreement divides subsidies into two categories—prohibited and actionable with the former including export subsidies and subsidies contingent on the use of domestic products over imported products. For a subsidy to be actionable it must meet the definition of a subsidy, that is, there must be a financial contribution (including revenue foregone) provided by government that confers a benefit on the recipient. In addition, the subsidy must be specific, that is, it must target for example a particular industry and it must have adverse effects. A list of such effects is provided in article 5 of the Subsidies Agreement, which includes injury to the domestic producers of a like product in competition with the imported subsidized product and serious prejudice.⁵⁸ Members affected by the use of subsidies by another Member may choose to either bring an action using the Dispute Settlement Understanding or may use the procedures set out in the Subsidies Agreement to impose countervailing duties against the subsidized products.

The two most widespread and arguably successful instruments utilized by Member States to promote biofuels are blending obligations and tax relief. Most Member States combine these two support measures and accompany an obligation to blend with a more favourable regime of taxation for blended fuels.⁵⁹ In addition to these general measures of support, Member States also utilize more specific policy instruments to promote biofuels at both the production and consumption phase.⁶⁰ As for whether the tax measures fall foul of the Subsidies Agreement, a number of questions need to be addressed. On the question of financial contribution, although it would appear that a reduction in the amount of tax owed would constitute a contribution in the form of a foregoing of revenue, the Panel in *US–FSC* opined that the foregoing of revenue cannot be presumed.⁶¹ To establish whether there has been a financial contribution an appropriate benchmark must be established and this will be based on the tax rules of the Member in question. What is being examined is ‘the fiscal treatment of legitimately comparable income.’⁶² Part of the problem in defining the existence of a subsidy in the biofuels area is that as the biofuels market is a creation of government intervention, establishing a workable benchmark may prove problematic. If a financial contribution is shown to exist that has been provided by government and it confers a benefit, the final question would be whether that subsidy has an adverse effect on another WTO Member.

Any support provided for factors of production, for example loans, whilst undoubtedly a contribution will also have to confer a benefit. Article 14 of the Subsidies

⁵⁸ Serious prejudice is further defined in art 6.3 of the Subsidies Agreement.

⁵⁹ Commission (EC) ‘Working Document—The Renewable Energy Progress Report Accompanying the Communication from the Commission to the Council and the European Parliament COM (2009) 192 final’ (Working Document) SEC (2009) 503, 34 April 2009, p 18.

⁶⁰ *ibid* 21. See also Commission Communication (n 36).

⁶¹ WTO, *United States: Foreign Sales Corporations—Report of the Panel* (18 October 1999) WT/DS108/R; paras 8.17–8.19.

⁶² WTO, *United States: Foreign Sales Corporations—Report of the Appellate Body (Article 21.5 EC)* (29 January 2002) WT/DS108/AB/R; 91–92.

Agreement makes it clear that a loan will confer a benefit when the recipient of that loan pays less than that payable on a comparable commercial loan that they could have obtained. Once again, adverse effects must be shown for this to be actionable. As to whether subsidies provided to consumers of biofuels would be actionable whilst there is obviously a contribution, as government foregoes revenue, the questions relate to whether the subsidy confers a benefit and especially whether it is specific. Another question relates to whether support for agricultural producers provides a downstream subsidy to biofuel processors. It would be difficult to argue that the subsidy is specific and that a benefit has been received and as noted in *US – Softwood Lumber*, it cannot be assumed that a benefit flows downstream. Rather, this would have to be proved.⁶³ A further issue that arises here is that of cross subsidisation. As there has been a significant growth in rapeseed meal as a result of biodiesel production there is a possibility that surpluses of such production could be exported, displacing other producers.⁶⁴

As for countervailing measures, it is worth noting that acting under Regulation 2026/97, in 2009 the European Commission imposed provisional countervailing duties ranging from €211 to €237 per tonne on exports of biodiesel from various American companies on the basis that such companies were benefitting from subsidies.⁶⁵ The complaint was made by the European Biodiesel Board, and the Commission investigation indicated evidence of subsidies at both federal and state levels in the United States. Having satisfied itself that the subsidies had led to deterioration in the prices charged and market share held by the Community industry, the provisional duties were made definitive by Regulation 598/2009.⁶⁶ Indeed, over the three year period, 2005–2007, imports of biodiesel from the United States had risen from about 7000 tonnes to about 1 million tonnes, which is sufficient to meet the serious prejudice criteria in article 6.3 of the Subsidies Agreement.

C. Conclusion

Together the Agreement on Agriculture and the Subsidies Agreement represent the most complete picture of the approach of the WTO towards the use of subsidies. With respect to EU Biofuels policy, recent changes have decreased the likelihood that action would be taken against the EU before the WTO using the dispute settlement process. The 2008 CAP Health Check has removed two of the more contentious bases for

⁶³ WTO, *United States: Preliminary Determinations with respect to Certain Softwood Lumber from Canada (US – Softwood Lumber III) – Report of the Panel* (27 September 2002) WT/DS236/R; paras 7.71–7.72.

⁶⁴ R Howse and others ‘WTO Disciplines and Biofuels: Opportunities and Constraints in the Global Marketplace’ (2006) IPC Discussion Paper; available at; http://www.agritrade.org/Publications/DiscussionPapers/WTO_Disciplines_Biofuels.pdf (last accessed 4 February 2010) 22.

⁶⁵ Commission Regulation (EC) 194/2009 imposing a provisional countervailing duty on imports of biodiesel originating in the United States of America [2009] OJ L 67/50; such action was taken under Council Regulation (EC) 2026/97 on protection against subsidized imports from countries not members of the European Community [1997] OJ L 288/1.

⁶⁶ Council Regulation (EC) 598/2009 imposing a definitive countervailing duty and collecting definitively the provisional duty imposed on imports of biodiesel originating in the United States of America [2009] OJ L 179/1.

the support of biofuels, that is, the Energy Crop Payment and the set-aside obligation. In both cases it was far from clear that support under both of these measures would satisfy the criteria of paragraphs 10 and 12 of Annex 2 of the Agreement on Agriculture, when read in conjunction with paragraph 1 of that provision.⁶⁷ EU Member States were given to 2009 to advise the Commission of their plans of how they would implement the renewable energy aspect of rural development and notification of the measures taken to the Committee on Agriculture is awaited with interest.⁶⁸ Will the EU use paragraph 13 of Annex 2 to justify support for biofuels? As for the Subsidies Agreement, the all-pervasive nature of government support in this sector makes disputes unlikely.⁶⁹ Such support creates problems in establishing that the criteria for an actionable subsidy exist, for example, in establishing appropriate benchmarks. It is more likely that action taken under the Subsidies Agreement will be countervailing action, similar to that taken by the EU against US exports of biodiesel. Overall, and as will be discussed below, it seems ironic that in reducing the chance of litigation before the WTO arising from subsidies as a result of changes in the EU Biofuels policy, those same changes have increased the chance of litigation under the discrimination provisions of the GATT. Such litigation could be initiated by a number of Members, for example Brazil, the world's largest ethanol producer,⁷⁰ which has not hesitated in challenging subsidies provided by developed countries in a number of areas, or by Members such as Indonesia and Malaysia, who may be detrimentally affected by the new sustainability criteria.⁷¹ We will consider such arguments more fully in the next section.

IV. DISCRIMINATION AND NATIONAL TREATMENT

As detailed above, the EU Renewable Energy Directive serves, at least in part, to make a formal distinction between biofuels and the raw materials which are used in their production depending upon their compliance with certain sustainability criteria. This section will consider the likely compatibility of measures which aim to make such a

⁶⁷ See for example J McMahon 'Reform through Litigation' (2007) 6 *Eurochoices* 2, 42.

⁶⁸ On the responses of the Member States, see http://ec.europa.eu/agriculture/rurdev/countries/index_en.htm which lists the Member States and gives details of the mid-term review of their rural development policy. See also WTO Doc. G/AG/N/EEC/64 (4 February 2010). The latest notification by the EU to the WTO of agricultural support for the marketing year 2006/07 revealed total support levels of €90.7 billion. This was constituted by Amber Box support of €26.6 billion, Blue Box support of €5.7 billion and Green Box support of €56.5 billion. The figure for the Green Box represents over twice the level of expenditure in the 2004/05 notification and of this figure only €3.775 billion was provided through regional assistance programmes.

⁶⁹ Complaints of subsidisation tend to lead to counterclaims, see for example WTO, *Canada: Measures Affecting the Export of Civilian Aircraft—Report of the Panel* (20 August 1999) WT/DS70/R [a complaint by Brazil] and WTO, *Brazil: Export Financing Programme for Aircraft—Report of the Panel* (20 August 1999) WT/DS46/R [a complaint by Canada].

⁷⁰ WTO, Trade Policy Body 'Trade Policy Review—Brazil' (11 May 2009) WT/TPR/S/212, 110–111.

⁷¹ In this regard, see ICTSD 'Malaysia Sees Possible WTO Case against EU Palm Oil Limits' (2010) 14 (18) *Bridges Weekly Trade News Digest*; available at <http://ictsd.org/i/news/bridgesweekly/76269/>, accessed 15 November 2010.

distinction with the national treatment obligation set out in article III GATT. In this regard, the first paragraph of article III states:

The contracting parties recognize that internal taxes and other internal charges, and laws, regulations and requirements affecting the internal sale, offering for sale, purchase, transportation, distribution or use of products, and internal quantitative regulations requiring the mixture, processing or use of products in specified amounts or proportions, should not be applied to imported or domestic products so as to afford protection to domestic production.

The underlying purpose of article III was described by the Appellate Body in *Korea-Alcoholic Beverages* as being to avoid protectionism, require equality of competitive conditions and protect expectations that equality of competitive relationships will abide.⁷² This purpose is met by various provisions within article III which seek to prevent arbitrary distinctions being made between imported and domestic products. In this regard, article III provides two possible avenues of complaint; paragraph 2 which concerns taxation and paragraph 4 which covers other regulations of commerce. Breach of either or indeed both of these provisions may, however, be justified by reference to article XX GATT.

A. Article III:2

A central support mechanism for biofuels in the Renewables Directive is the imposition of a differential tax regime upon otherwise identical biofuels.⁷³ In assessing the compatibility of such provisions with WTO legal disciplines, article III:2 GATT deals with issues of taxation or other forms of internal charges imposed upon imported products and provides:

The products of the territory of any contracting party imported into the territory of any other contracting party shall not be subject, directly or indirectly, to internal taxes or other internal charges of any kind in excess of those applied, directly or indirectly, to like domestic products. Moreover, no contracting party shall otherwise apply internal taxes or other internal charges to imported or domestic products in a manner contrary to the principles set forth in paragraph 1.

A Note *Ad* to article III further sets out that;

A tax conforming to the requirements of the first sentence of paragraph 2 would be considered to be inconsistent with the provisions of the second sentence only in cases where competition was involved between, on the one hand, the taxed product and, on the other hand, a directly competitive or substitutable product which was not similarly taxed.

The two sentences of article III:2 serve a different legal purpose. The first mandates that identical taxation be applied to 'like' domestic and imported products while the second draws on the principle set down in article III:1 and provides that 'directly

⁷² WTO, *Korea: Taxes on Alcoholic Beverages—Report of the Appellate Body* (18 January 1999) WT/DS75/ABR and WT/DS84/ABR; para 120. See also WTO, *Japan: Taxes on Alcoholic Beverages II— Report of the Appellate Body Report* (4 October 1996) WT/DS8/ABR, WT/DS10/ABR, WT/DS11/ABR; 21.

⁷³ On energy taxation, see generally Council Directive (EC) 2003/96 restructuring the Community framework for the taxation of energy products and electricity [2003] OJ L 283/51 [as amended]; see also Council Directive 2008/118/EC of 16 December 2008 concerning the general arrangements for excise duty and applicable to the taxation of energy products and electricity; 2008/118/EC.

competitive or substitutable products' should be similarly taxed so as to not afford protection to domestically produced products. In *US–Tobacco* it was noted that if a measure has been found to be inconsistent with the first sentence, the second sentence need not be considered.⁷⁴

The first sentence of article III:2 is concerned with taxation of imported products in excess of 'like' domestic products. Assuming that a system of taxation which grants an advantage to biofuels adhering to sustainability criteria would be considered to be an 'internal tax or charge' within the meaning of article III:2, the first question relates to the WTO compatibility of a taxation regime which favours biofuels produced in a 'sustainable' manner. This raises the question of like products which will involve a comparison between sustainably produced biofuels and other biofuels which do not meet the criteria set out in the Renewable Energy Directive. The Appellate Body in *Japan–Alcoholic Beverages II*⁷⁵ outlined that products may be considered to be 'like' by reference to the requirements outlined in the Report of the Working Party on Border Tax Adjustments.⁷⁶ This Report lists a number of criteria typically shared by 'like' products such as the physical properties of a good, its end use and consumer perceptions of the product. The additional criterion of tariff classification has also been recognised in case law as relevant to the question of likeness.⁷⁷ Only when two products are 'like' is it investigated whether imported products have been taxed in excess of their domestic counterparts.⁷⁸ Thus a regime which makes a distinction between conventional [unblended] fuels and those mixed with biofuels seems permissible given that it can be argued that they are not 'like' products. It should also be noted that a differential taxation regime in itself is GATT compatible if it does not distinguish between domestic and imported products.

The second sentence of GATT article III:2 requires a complainant to show that the imported and domestic product are directly competitive or substitutable products that are in competition with each other, the products are not similarly taxed, and the dissimilar taxation is applied so as to afford protection to domestic production. The first requirement applies to 'directly competitive and substitutable products' and focuses on factors such as cross-price elasticity of substitution.⁷⁹ As such, the existence of a 'direct competitive relationship between two products or groups of products requires evidence that consumers consider or could consider the two products or groups of products as alternative ways of satisfying a particular need or taste.'⁸⁰ The Panel in *Korea–Alcoholic Beverages* warned that 'product categories should not

⁷⁴ GATT, *United States: Tobacco – Report of the Panel* (4 October 1994) DS44/R; para 101.

⁷⁵ WTO, *Japan: Alcoholic Beverages II* (n 72) 21.

⁷⁶ GATT 'Report of the Working Party on Border Tax Adjustments' (2 December 1970) BISD 18S/97.

⁷⁷ See generally B J Condon, 'Climate Change and Unresolved Issues in WTO Law' (2009) 12 (4) *Journal of International Economic Law* 895, 906.

⁷⁸ It is to be noted that the Appellate Body opined in *Japan: Alcoholic Beverages II* (n 72) that the question of likeness under the first sentence of Article III:2 is to be considered on a case-by-case basis with decision makers directed to 'keep ever in mind how narrow the range of 'like products' in Article III:2, first sentence is meant to be as opposed to the range of 'like' products contemplated in some other provisions of the GATT 1994 . . . ;' 20.

⁷⁹ WTO, *Japan—Alcohol II* (n 72) 25.

⁸⁰ WTO, *Korea: Taxes on Alcoholic Beverages—Report of the Panel* (17 February 1999) WT/DS75/R and WT/DS84/R; para 10.40.

be construed so narrowly as to defeat the purpose of the anti-discrimination language informing the interpretation of article III.⁸¹ The Appellate Body in the same dispute noted that the essence of the relationship is that products are in competition, but this does not depend solely on current consumer preferences if the products are capable of being substituted. The test may be satisfied if the products are interchangeable or if they offer alternative ways of satisfying a particular taste or need.⁸²

The criterion of 'not similarly taxed' will be satisfied where there is a non-*de minimis* difference between the rates of tax applied to imports and to domestic products that are directly competitive or substitutable.⁸³ The test will be applied on a case-by-case basis. As for the question of whether the measure affords protection to domestic production, this will require an examination of how the measure is applied. The Appellate Body in *Canada—Periodicals*⁸⁴ noted that the phrase was intended to cover both the objectives of the measure and its effects. This may require an examination of the legislative history of the measure, although it must be admitted that in most cases the protective nature of the measures in question have been self-evident. The imposition of differential tax regimes on the basis of sustainability may fall foul of article III:2 as this is a non-trade objective. To use such an objective to justify a measure under article III risks intruding into the area covered by article XX GATT.

B. Article III: 4

Article III:4 provides for 'no less favourable treatment' between 'like' domestic and imported products in respect of 'all laws, regulation and requirements affecting their internal sale, offering for sale, purchase, transportation, distribution or use.' In order for the prohibition in article III:4 to be engaged, there must be (a) less favourable treatment between imported and domestic products; (b) the imported and domestic products must be considered to be 'like' products and; (c) the less favourable treatment must relate to a law, regulation or other requirement which; (d) affects the internal sale, offering for sale, purchase, transportation, distribution or use of the product concerned.⁸⁵ It should be noted at the outset that a distinction can be drawn between biodiesel and bio-ethanol. There are no specific tariff lines within the EU for either fuel ethanol or biodiesel with the latter being imported under the classification, Other Chemicals (38 24 90 98), and the former being imported under undenatured alcohol (22 07 20).⁸⁶ The most-favoured-nation (mfn) bound tariff for biodiesel is 6.5 per cent

⁸¹ *ibid* para 10.38.

⁸² WTO, *Korea—Alcohol* (n 72) para 114–115.

⁸³ WTO, *Japan—Alcohol II* (n 72) 26.

⁸⁴ WTO, *Canada: Certain Measures Concerning Periodicals—Report of the Appellate Body* (30 July 1997) WT/DS31/AB/R; 30–32.

⁸⁵ WTO, *Korea: Various Measures on Beef—Report of the Appellate Body* (11 December 2001) WT/DS161/AB/R, WT/DS/169/AB/R; para 134.

⁸⁶ In 2005, the World Customs Organisation (35th Session) recommended a separate tariff line for biodiesel; as cited in M Kamal Gueye, 'Linkages Between Biofuels, Trade and Sustainable Development' (2009) ICTSD available at <http://ictsd.org/downloads/2009/06/moustapha-kamal-gueye.pdf>, accessed 18 March 2010. Given the other uses of ethanol the creation of a specific tariff line for ethanol to be used as fuel is not possible.

(other vegetable oils used in biodiesel production have a bound tariff of 3.2 per cent or are free) whereas the bound duty for ethanol is either €19.2/hectolitre or €10.2/hectolitre depending on the alcohol content and there is an *ad valorem* equivalent tariff of either 63 per cent or 39 per cent.⁸⁷

The relevance of article III:4 to our review stems from the question of whether the operation of the sustainability criteria is such as to subject imported biofuels to 'less favourable treatment' than 'like' domestic products. Where treatment of an imported good is no 'less favourable' than that of domestic goods, there will be effective equality of opportunities for imported products.⁸⁸ It therefore needs to be considered whether the introduction of sustainability criteria is such as to modify the conditions of competition between imported and domestic biofuels.

At the outset, it should be noted that although adherence to the sustainability criteria is not mandatory, as outlined in article 17 (1) of the Directive, compliance with the sustainability criteria is *necessary* in order that a benefit be received. Thus, while biofuels which do not adhere to the sustainability criteria set out in the Renewables Directive may still make it on to European markets, they will not receive the 'advantage' of being able to be used to meet targets or receive other forms of financial support. A similar situation arose in *Mexico—Taxes on Soft Drinks* in which producers of soft drinks and syrups received various tax exemptions and a reduced administrative burden provided they used cane sugar as opposed to beet sugar or non-fructose corn syrup. The measures, taken together, created an incentive to use cane sugar as a sweetener. According to the Panel, while these measures did not legally impede producers from using non-cane sugar sweeteners, 'they significantly modify the conditions of competition between cane sugar, on the one hand, and non-cane sugar sweeteners . . . on the other hand.'⁸⁹ Thus, while there is no legal impediment to the use or indeed importation of biofuels which do not adhere to the strict sustainability criteria, there is an incentive against their use. As such, the establishment of these criteria is likely to alter significantly the conditions of competition between 'sustainably' produced and 'unsustainably' produced biofuels since that is the *very purpose* of the establishment of such rules.

However, this does not necessarily equate unsustainably produced biofuels with imported products and sustainably produced biofuels with domestic production. Even if this could be proven to be the case, the phrase 'no less favourable treatment' is to be interpreted strictly in that a mere difference in treatment between imported and domestic products would not be sufficient to establish less favourable treatment.⁹⁰

⁸⁷ The EU offers duty-free and quota-free access to the EU ethanol market to the ACP countries, under the Everything but Arms [EBA] initiative and GSP+ scheme and under various bilateral agreements.

⁸⁸ WTO, *Japan: Measures Affecting Consumer Photographic Film and Paper—Report of the Panel* (31 March 1998) WT/DS44/R para 10.379.

⁸⁹ WTO, *Mexico: Taxes on Soft Drinks—Report of the Panel* (7 October 2005) WT/DS308/R; para 8.117. The findings of the Panel in respect of article III were not appealed by Mexico in WTO, *Mexico: Taxes on Soft Drinks—Report of the Appellate Body* (6 March 2006) WT/DS308/ABR. See also WTO, *Canada—Certain Measures Concerning Periodicals—Report of the Panel* (30 July 1997) WT/DS114/R which asked at para 5.36; '[a]re there reasonable grounds to believe that sufficient incentives or disincentives existed for the measure to take effect, and was the operation of the measure essentially dependent on Government action or intervention?'

⁹⁰ GATT, *United States: Section 337 of the Tariff Act—Report of the Panel* (7 November 1989) BISD 30S/107 para 5.11.

According to the Appellate Body's direction in *Dominican Republic–Import and Sale of Cigarettes*, 'the existence of a detrimental effect on a given imported product resulting from a measure does not necessarily imply that this measure accords less favourable treatment to imports if the detrimental effect is explained by factors or circumstances unrelated to the foreign origin of the product.'⁹¹ So, even if a detrimental effect upon imported products was shown, such treatment is not necessarily less favourable if it can be explained by reference to factors other than national origin.

It is argued that while the existence of sustainability criteria does not in itself subject imported products to treatment which is 'less favourable' within the meaning of article III:4, the core sustainability criterion of a 35 per cent greenhouse gas savings may be problematic. It is possible that this figure could favour biofuel production from domestically produced rapeseed oil over imported products such as biodiesel derived from palm oil.⁹² Indeed, the 'default' greenhouse gas savings for biodiesel produced from rapeseed set out in the Directive is listed as 38 per cent. While 'actual' savings may be higher than this, it is notable that this figure compares rather unfavourably with the default for biodiesel produced from palm oil which is listed as achieving greenhouse gas savings of only 19 per cent.⁹³ Both these figures assume that there are no emissions associated with direct land-use change and do not specify the production method to be used. It is, however, clear that different modes of production will have an impact upon the greenhouse gas savings associated with particular biofuels, thereby potentially leading to a distinction being made between such fuels based upon the process and production methods used in their manufacture. While a more detailed examination is required of both the impact of these default values and reasons behind the introduction of the value of 35 per cent greenhouse gas savings, it is possible that their combined effect could result in less favourable treatment of imported biofuels as well as the raw materials used in their production. This is particularly so if the use of the 35 per cent greenhouse gas savings criterion is such as to 'modify the conditions of competition'⁹⁴ between imported and domestic biofuels.⁹⁵

Having established that a distinction in treatment between domestic and imported biofuels based upon the 35 per cent criterion could potentially constitute 'less favourable treatment' for the purposes of article III:4, the next step in the examination is to assess whether biofuels which meet such sustainability criteria are 'like' biofuels which do not. This is important since the national treatment obligation contained in article III:4 does not preclude differential treatment of biofuels in accordance with sustainability criteria to the extent that the products concerned are 'unlike.'

⁹¹ WTO, *Dominican Republic: Import and Sale of Cigarettes – Report of the Appellate Body* (19 May 2005) WT/DS302/AB/R para 96.

⁹² E Erixon 'Standard as protectionist device: the EU Renewable Energy Directive' (2009) 8 ICTSD Trade Negotiations Insights 10, available at <http://ictsd.org/i/news/tni/65860/>, accessed 6 February 2010.

⁹³ EC Renewable Energy Directive 2009/28; Annex V.

⁹⁴ WTO, *Korea – Beef* (n 85) paras 135–137.

⁹⁵ It is to be noted that default values exist in relation to only a limited range of biofuels. In this regard, there is as yet no default value for US corn ethanol with actual values required to be used in this regard. It is, however, likely that further default values will be added by the Commission in due course, see A Lendle and M Schaus 'Sustainability Criteria in the EU Renewable Energy Directive' (2010) ICTSD Information Note No. 2; available at http://ictsd.org/downloads/2010/10/case_brief_renewable_energy_dir_v5.pdf, accessed 15 November 2010, 9.

In approaching the question of 'like products' the Appellate Body in *EC-Asbestos* considered that likeness under article III:4 turns upon a 'determination about the nature and extent of a competitive relationship between and among products.'⁹⁶ As noted previously, in assessing the criterion of likeness, recourse to the 1970 GATT Working Party Report on Border Tax Adjustments is usually made although this does not provide an all encompassing account of 'likeness.'⁹⁷

Where two biofuels have indistinguishable physical characteristics, the same end use and a similar if not identical tariff classification, under the GATT Working Party Report, the only criterion upon which a distinction can be made on the grounds of sustainability would be consumer perceptions. This ground for determining likeness was particularly relevant in the dispute of *EC-Asbestos*.⁹⁸ While it is as yet unclear whether a distinction may be made between products based upon the way they are made, it is possible that consumer concerns as to the importance of promoting sustainably produced biofuels may permit a distinction to be made between otherwise 'like' biofuels. However, the more difficult question arises as to the use of a particular methodology for assessing sustainability which distinguishes between otherwise identical products. This methodology could well be used to bolster consumer perceptions that a product is or is not 'sustainable.' Where such methodology is questionable, the Panel in *EC-Sardines* made it clear that manipulated consumer perceptions will not be accepted as a permissible ground for a country to justify the imposition of trade restrictive measures.⁹⁹

The preceding paragraphs have surveyed some of the disputes on the extent to which the process and production methods undertaken in manufacturing a product can be used to differentiate between what are from a tariff point of view like products. The state of the law in this area is difficult to state with any degree of certainty as there is no explicit acceptance of the legality or illegality of such measures.¹⁰⁰ What the EU is trying to do in introducing the sustainability criteria is to draw a distinction between like products on the basis of their mode of production and the contribution made to greenhouse gas reduction therein. In so far as criteria are introduced which are origin neutral it may be that any differential treatment that results will not fall foul of the non-discrimination requirements of article III. In the event that they do, there is always the possibility of using article XX to justify such discrimination. We examine this provision below.

⁹⁶ WTO, WTO, *European Communities: Measures Affecting Asbestos and Asbestos Containing Materials – Report of the Appellate Body* (5 April 2001) WT/DS135/AB/R. This analysis is based upon a previous piece by one of the authors (Switzer, n 1).

⁹⁷ GATT, Border Tax Adjustments (n 76).

⁹⁸ WTO, *EC-Asbestos* (n 96) para 122; see also criticism by the Appellate Body regarding the Panel's failure to assess likeness on the grounds of consumer perception.

⁹⁹ Panel Report WTO, *European Communities: Trade Description of Sardines – Report of the Panel* (23 October 2002) WT/DS231/R; para 7.127 in which it was stated in the context of art 2.4 TBT, 'If we were to accept that a WTO Member can 'create' consumer expectations and thereafter find justification for the trade-restrictive measure which created those consumer expectations, we would be endorsing the permissibility of 'self-justifying' regulatory trade barriers.'

¹⁰⁰ There is a rich literature in this area, see for example, S Charnovitz 'The Law of Environmental PPMS in the WTO: Debunking the Myth of Illegality' (2002) 27 *Yale Journal of International Law* 59, R Howse and D Regan 'The Product/Process Distinction: An Illusory Basis for Disciplining Unilateralism in Trade Policy' (2002) 11 *EJIL* 249 and F Roessler 'Beyond the Ostensible' (2003) 37 *Journal of World Trade* 771.

C. Article XX GATT

Article XX is an almost exhaustive list of exceptions to the basic GATT obligations.¹⁰¹ The order of analysis in this article is that the proposed justification is measured against one (or more) of the ten exceptions before being tested against the requirements laid down in the opening paragraph (or chapeau) to article XX.¹⁰² The chapeau requires the non-discriminatory application of measures for like goods originating in countries where the same conditions prevail. With reference to the sustainability criteria adopted in the Renewables Directive, the EU could seek to rely on either paragraph (b) or paragraph (g). The former allows Members to enact measures which are ‘*necessary* to protect human, animal or plant life or health’ [emphasis added] and this would allow the EU to argue that their promotion of ‘sustainable’ biofuel which leads to a reduction in green house gas emissions when compared to fossil fuels is necessary so as to protect human, animal and plant life from the dangers of climate change.¹⁰³ To the extent that this argument is accepted, the examination would then turn to whether the measures in question are necessary to fulfill the relevant policy objective.¹⁰⁴ The necessity requirement in paragraph (b) suggests that there must be no other measure which is less restrictive, and which can achieve the same result. In the context of paragraph (d), which also uses the expression ‘*necessary*’, the Appellate Body in *Korea–Beef* indicated that there exists a continuum of meaning in regard to the term ‘*necessity*’, alluding to measures which do more than make a contribution to achieving the designated goal but not confined to those which are ‘*inevitable*’ or ‘*absolutely necessary*’.¹⁰⁵ Having referred to this decision, the Appellate Body in *Brazil–Retreaded Tyres* noted that the selection of a methodology to assess measures is a function of the nature of the risk, the objective pursued, and the level of protection sought.¹⁰⁶ It ultimately depends on the nature of the risk, quantity, and quality of evidence at the time the analysis is made with a preference being given to those measures that are the least inconsistent with GATT obligations.¹⁰⁷

¹⁰¹ See also Article XXI of the WTO General Agreement on Tariffs and Trade 1994, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1A, The Legal Texts: The Results of the Uruguay Round of Multilateral Trade Negotiations 17 (1999), 1867 UNTS 187, 33 ILM 1153 (1994) [hereinafter GATT 1994].

¹⁰² WTO, *United States: Standards for Reformulated and Conventional Gasoline—Report of the Appellate Body* (20 May 1996) WT/DS2/AB/R para 22.

¹⁰³ In this regard, the European Commission has produced numerous reports articulating a link between climate change and harm to human, animal and plant life or health; see, for example, Commission (EC) ‘Accompanying document to the White Paper Adapting to climate change: Towards a European framework for action Human, Animal and Plant Health Impacts of Climate Change’ (Staff Working Document) SEC(2009) 416.

¹⁰⁴ This order of examination under art XX (b) GATT 1994 was set out in WTO, *United States: Standards for Reformulated and Conventional Gasoline—Report of the Panel* (20 May 1996) WT/DS2/R para 6.20.

¹⁰⁵ WTO, *Korea–Beef* (n 85) para 161. The Appellate Body also noted that this process ‘[I]nvolves in every case a process of weighing and balancing a series of factors which prominently include the contribution made by the compliance measure to the enforcement of the law or regulation at issue, the importance of the common interests of values protected by that law or regulation, and the accompanying impact of the law or regulation on imports or exports;’ para 164.

¹⁰⁶ WTO, *Brazil: Measures Affecting Imports of Retreaded Tyres—Report of the Appellate Body* (3 December 2007) WT/DS332/AB/R para 145.

¹⁰⁷ See also WTO, *Korea – Beef* (n 85) para 165.

In regard to the requirement that the measure at issue be ‘necessary’ in order to fit within the exception outlined in article XX (b), one issue not addressed by the Renewable Energy Directive was the question of whether to introduce sustainability criteria for solid and gaseous [i.e. non-liquid] biomass sources used in electricity, heating and cooling. Article 17 (9) of the Directive tasked the Commission to report by 31 December 2009 on the possibility of introducing sustainability requirements for such energy uses. A public consultation held on the issue found the overwhelming majority of respondents to be in favour of the introduction of criteria in this area.¹⁰⁸ A smaller majority of respondents were supportive of a legally binding scheme whereby only biomass found to adhere to sustainability criteria could be used to meet national targets.¹⁰⁹ Furthermore, a majority of respondents were in favour of such criteria being extended to imports so as to ensure conditions of ‘fair competition’ with domestic biomass stock.¹¹⁰

A set of proposals were consequently published by the Commission in March 2010. These recommend that Member States adopt largely the same sustainability criteria for biomass as applicable to biofuels under the Renewable Energy Directive.¹¹¹ This is however merely an indicative and non-binding recommendation, creating the potential for a substantially different regime to be applied to biofuel feedstocks depending upon their end use. It is arguable that any resulting disparity of treatment between biomass for transport and other energy uses such electricity and heating may result in the biofuel sustainability criteria promulgated by the Renewable Energy Directive being more difficult to justify as ‘necessary’ under article XX (b) of the GATT. This is particularly so given the jurisprudence of the Appellate Body suggests that there must exist a ‘genuine relationship of ends and means between the objective pursued and the measure at issue.’¹¹² Hence, where regulation of solid and gaseous biomass feedstocks for use in electricity, heating and cooling is subjected to a more lax regulatory regime, the establishment of a genuine relationship between the measure and the aim to be achieved may be more difficult to satisfy.¹¹³

Having considered the issue of whether the EU would be able to rely upon the provisions of article XX (b), it is also necessary to delineate upon whether a defence could arise in relation to article XX (g). Paragraph (g) covers measures ‘relating to the conservation of exhaustible natural resources if such measures are made effective in conjunction with restrictions on domestic production or consumption.’ This could

¹⁰⁸ European Commission, Directorate General for Energy and Transport ‘Results of the Public Consultation on the preparation of a report on requirements for a sustainability scheme for energy uses of biomass’ (Consultation) June 2009, available at http://ec.europa.eu/energy/renewables/consultations/doc/results_public_consultation_biomass_sustainability_scheme.pdf, accessed 6 February 2009).¹⁰⁹ *ibid* 8.¹¹⁰ *ibid* 7.

¹¹¹ Commission (EU) ‘Report on sustainability requirements for the use of solid and gaseous biomass sources in electricity, heating and cooling’ (Report) COM(2010), 8.

¹¹² WTO, *United States: Measures Affecting the Cross-Border Supply of Gambling and Betting Services—Report of the Appellate Body* (20 April 2005) WT/DS285/AB/R; para 145.

¹¹³ It is to be noted that the Commission is to report by 31st December 2011 on the desirability of mandatory criteria and hence the situation at the time of writing is very much in flux, see Commission (n 110) 10. In addition, the recent Appellate Body decision in WTO, *Thailand: Customs and fiscal Measures on Cigarettes from the Philippines – Report of the Appellate Body* (17 June 2011) DS/371/ABR may change the interpretation afforded to the meaning of ‘necessary’ under Article XX (b) although the decision itself was confined to consideration of Article XX (d); see in particular paras 176–179.

potentially allow the EU to argue that the sustainability criteria are required to conserve the climate, which could be classified as an exhaustible natural resource.¹¹⁴ The EU would also be required to demonstrate that the measures at issue relate to the conservation of 'climate.' In this regard, the Appellate Body in *US – Shrimp* held that the 'relating to' requirement implied that there is a *real connection* between a measure and the conservation of exhaustible natural resources.¹¹⁵ The paragraph also requires the Member to adopt domestic measures aimed at the protection of exhaustible natural resources.

Even if the measure is found compatible with a particular paragraph it must also satisfy the requirements of the chapeau, i.e. it must not amount to arbitrary or unjustifiable discrimination or a disguised restriction on international trade. What the chapeau is designed to do is to prevent the abuse of the freedom enjoyed by Members under article XX. The way in which the chapeau is applied in individual cases is not 'fixed and unchanging' but rather 'moves as the kind and shape of the measures at stake vary and as the facts making up specific cases differ'.¹¹⁶ It is worth noting, however, that the objective of the chapeau is shared by article III even if the standards by which they are judged are necessarily distinct.¹¹⁷

D. Conclusion

The introduction of the sustainability criteria in the Renewable Energy Directive could open the EU to dispute settlement proceedings before the WTO as there are reasonable grounds to suggest that certain aspects of the application of these criteria may amount to a breach of article III GATT. With respect to article III:2, by allowing for a differential tax regime upon otherwise identical biofuels, it could be argued that if the regime is used to support domestic biofuels at the expense of imported biofuels, a difference in fiscal treatment is made between like products or products which are in direct competition. The difference may be being used so as to afford protection to domestic production contrary to the requirements of article III. Similar concerns arise in relation to the 35 per cent greenhouse gas savings applicable to biofuels counted towards national targets. Arguments have been advanced that this figure tends to favour biofuels produced from domestic feedstocks such as rapeseed oil. Such arguments appear to have at least some validity in light of the reference values for greenhouse gas savings listed in the Directive itself. Whilst the EU may seek to defend such action using article XX, arguments that such measures are 'necessary' pursuant to article XX (b) may

¹¹⁴ In this regard, see WTO, *US – Gasoline* (n 102) in which 'clean air' was held to be an exhaustible natural resource. Furthermore, in WTO, *United States: Import Prohibition of Certain Shrimp and Shrimp Products – Report of the Appellate Body* (6 November 1998) WT/DS58/AB/R, the Appellate Body directed that the phrase exhaustible natural resources 'must be read by a treaty interpreter in the light of contemporary concerns of the community of nations about the protection and conservation of the environment... the generic term of "natural resources" in art XX (g) is not "static" in its content or reference but is rather, "by definition, evolutionary."'

¹¹⁵ *ibid* para 141.

¹¹⁶ WTO, *Brazil: Measures Affecting Imports of Retreaded Tyres—Report of the Panel* (3 December 2007) WT/DS332/R para 7.262.

¹¹⁷ Though note WTO, *US – Gasoline* (n 100); para 21 in which it was noted that '[t]he provision of the chapeau cannot logically refer to the same standards by which a violation of a substantive rule has been determined to have occurred.'

come under fire as a consequence of the lax regulatory regime applied to biomass. Furthermore, the chapeau of article XX would prevent such measures having a discriminatory impact.

V. CONCLUSION

In *US-Shrimp*,¹¹⁸ the Appellate Body avoided answering the question of whether the extraterritorial application of a measure was permissible under article XX. The measure imposed on exporting countries a particular method of obtaining a product, when exporting that product to the US. However, it did make clear that measures are not inconsistent with article XX simply because they are unilateral although particular significance was attached to attempts to come to a multilateral understanding on the particular measure. With respect to the sustainability criteria adopted in the Renewable Energy Directive, this would suggest that whilst the WTO dispute settlement bodies will not condemn the unilateral approach of the EU, international agreement on these criteria would lend considerable support to the justification of any WTO-inconsistent measures taken by the EU.

Such international action is promoted by article 17 (3) of the Renewables Directive which directs the EU to 'endeavour' to conclude agreements with third countries which contain criteria corresponding to those set out in the Directive. Where such an agreement has been formed, the Commission has the power to decide that in regard to raw materials produced in such countries, there arises the presumption that they have been obtained in a manner which conforms to the sustainability criteria outlined in the Directive. Other international or national schemes may also be recognized as being 'equivalent' to or as providing reliable data for the purposes of the sustainability criteria.¹¹⁹ A recent study by the World Bank argued the 'greatest technical barrier in the coming years could be certification of biofuels for environmental sustainability'.¹²⁰ In order to prevent the introduction of sustainability criteria for biofuels dissolving into a trade dispute, the EU and other countries pursuing biofuels as an 'alternative' to fossil fuels would be best advised to conclude an international agreement on the appropriate application of such criteria, which should include all factors, including environmental and social, that have an impact on production. The formulation of an international agreement on the issue would also be preferable to a series of bilateral accords due to concerns that a bilateral scheme could, for example, segment the market and lead to increased costs for exporters who would suffer from considerable bureaucratic complexities.¹²¹

In addition to engaging in multilateral negotiations on the sustainability criteria, it could be argued that if the EU is serious in its commitment to biofuels then it should

¹¹⁸ WTO, *US-Shrimp* (n 114) and WTO, *United States: Import Prohibition of Certain Shrimp and Shrimp Products – Recourse to Article 21.5 of the DSU by Malaysia – Report of the Appellate Body* (21 November 2001) WT/DS58/AB/RW.

¹¹⁹ EC Renewable Energy Directive 2009/28, art 18 (4). In this regard, see generally comment (n 37).

¹²⁰ M Kojimi and others 'Considering Trade Policies for Liquid Biofuels' (2007) World Bank ESMAP, available at http://siteresources.worldbank.org/INTOGMC/Resources/Considering_trade_policies_for_liquid_biofuels.pdf xiv, accessed 7 February 2010.

¹²¹ R Doornbos and R Steenblik 'Biofuels: Is the Cure Worse than the Disease?' (2007) OECD SG/SD/RT, 8.

liberalize the tariff regime for these products, particularly for bioethanol which faces high MFN tariffs. Such liberalisation should go hand-in-hand with the introduction of sustainability criteria to discourage negative environmental effects such as the clearance of forested land, biodiverse land or land with high carbon content. Proposals have been made to 'mix' biofuels with other 'climate friendly' goods for the purposes of customs classification at the six digit Harmonised System code level.¹²² An alternative, though related, proposition would be to create a new six digit code within the HS system covering trade in renewable energy products, for example using Chapters 98 and 99 of the system to create new tariff lines for environmental goods.¹²³ The advantage of such a development is that it could enhance the clarity of the system by eliminating the confusing dichotomy in the legal disciplines governing ethanol and biodiesel.

This liberalization option would also feed into the emphasis placed within the Doha Ministerial declaration upon 'the reduction, or, as appropriate, elimination of tariff and non-tariff barriers to environmental goods and services.'¹²⁴ Under the auspices of these negotiations, in October 2007, Brazil submitted a proposal to the WTO that the definition of an environmental good should include biofuels, thus advocating a broad reading of environmental goods and services (EGS), which departs from the traditional thinking that only industrial products can constitute environmental goods.¹²⁵ The 'benefit' of reclassification of biodiesel and bioethanol as 'environmental goods' would be that it could assist the process of liberalisation of trade in biofuels without discrimination as to the feedstocks involved, and curtail discussion of the appropriate classification of the feedstocks to be used for second and third generation biofuels.¹²⁶ Liberalisation could contribute to the 'range of options' available to policymakers in tackling problems such as climate change and could facilitate rapid diversification of energy supply options.¹²⁷

Discussions on liberalisation also link to those on sustainability. In this regard, the introduction of sustainability criteria by the EU raises the prospect of a challenge before the WTO in which the EU would raise a defence under article XX. If the EU is to successfully defend any potential challenge it should initiate international negotiations on sustainability criteria. Such negotiations should also address the issue

¹²² World Bank 'Warming Up to Trade: Harnessing International Trade to Support Climate Change Objectives' (2007) World Bank, available at http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2007/07/05/000310607_20070705152626/Rendered/PDF/402170REVISED01and1Climate01PUBLIC1.pdf 85, accessed 18 March 2010.

¹²³ See for example, R Steenblik 'Liberalisation of Trade in Renewable-Energy Products and Associated Goods: Charcoal, Solar Photovoltaic Systems, and Wind Pumps and Turbines' OECD Trade and Environment Working Paper No. 2005-07 COM/ENV/TD(2005)23/FINAL, 8-9, and J A Kim 'Issues of Dual Use and Reviewing Product Coverage of Environmental Goods' (2007) *OECD Trade and Environment Working Papers*, 2007/1, OECD Publishing, COM/ENV/TD(2006)30/FINAL, 10.

¹²⁴ WTO 'Doha Ministerial Declaration' (2001) WT/MIN(01)/DEC/1 para 31(iii).

¹²⁵ WTO Doc. JOB 07/146; see also 'Biofuels, organic food proposed as environmental goods' http://www.wto.org/english/news_e/news07_e/envir_nov07_e.htm (8 October 2007, accessed 18 March 2010).

¹²⁶ M Kojimi (n 120) 45; World Bank (n 122) 70.

¹²⁷ *ibid*, World Bank, 87 for an argument that the existing WTO plurilateral agreement, the Government Procurement Agreement, which did not form part of the single undertaking in the Uruguay Round, could be a model for an agreement on liberalisation of products and services beneficial to climate.

of liberalisation of trade in biofuels as a reflection of the multiple strands of policy in this area. Biofuels are not an end but merely a means to end—they can combat climate change and increase fuel security but must do so in a way that does not do further damage to the environment or ignore the social issues not included in the sustainability criteria, in particular food security. As Robert Zoellick, President of World Bank, noted in 2008: ‘While many worry about filling their gas tanks, many others around the world are struggling to fill their stomachs. And it’s getting more and more difficult every day.’¹²⁸ Attempts to resolve one set of problems should not lead to the creation of another set of problems only to be resolved at greater cost later.

STEPHANIE SWITZER* AND JOSEPH A McMAHON**

¹²⁸ As cited in T Rice ‘Meals per gallon: Impact of Industrial Biofuels on People and Global Hunger’ (2009) Action Aid available at http://www.actionaid.org/micrositeAssets/eu/assets/aa_biofuelsreportweb100210.pdf, accessed 19 March 2010.

* School of Law, University of Dundee. Email: s.switzer@dundee.ac.uk.

** School of Law and Institute for Food and Health, University College Dublin. Email: joseph.mcmahon@ucd.ie.