
EU Climate Change Unilateralism

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Abstract

The EU is engaged in an ambitious, controversial, and high-stakes experiment to extend the reach of its climate change law. It is seeking to use its market power to stimulate climate action, and to substitute for climate inaction, elsewhere. This is most apparent in relation to the EU's decision to include aviation in its emissions trading scheme. While we are sympathetic to the EU's objectives, and do not take issue with its unilateral means, we argue that the EU is not giving adequate weight to the principle of Common but Differentiated Responsibilities and Respective Capabilities (CBDRRC). While the status, meaning, and implications of this principle are contested and unclear, it requires that developed countries should take the lead in addressing the causes and effects of climate change. We argue that the concept of CBDRRC retains relevance in the context of unilateral climate action, and that the EU's Aviation Directive should be interpreted, applied, and where necessary adjusted in the light of it. We put forward two concrete proposals to achieve this end.

1 Introduction

In the area of climate change, the EU is currently engaged in a strategy of 'contingent unilateralism'. Contingent unilateralism consists of two key components. First, it involves the application of EU climate change law to greenhouse gas emissions that are generated abroad. Secondly, it renders this geographical extension contingent in the sense that the EU may agree to waive the external application of its climate change law if adequate international or third country climate change regulation has been put

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in place.¹ The phenomenon of contingent unilateralism is most apparent in the EU framework governing the emissions trading scheme (ETS).²

While this article focuses primarily on the EU's decision to include aviation in the ETS, it is important to be aware that this decision forms part of a broader trend. Thus, arguments articulated in the context of the aviation example may have implications elsewhere. The EU's strategy of contingent unilateralism should also be viewed against the backdrop of the concept of a climate change 'regime complex'.³ This concept captures the idea that in the absence of a comprehensive, multilateral framework for regulating climate change, global action on climate change is emerging in a fragmented manner, on the basis of action by private parties as well as by many national and international organizations, and states. It is important to keep this concept in mind when we consider the extent to which principles that find expression in multilateral climate change agreements should be considered as relevant in giving shape to the 'bits and pieces' that, for the time being at least, make up the climate change governance whole.

2 Contingent Unilateralism and the ETS

There are four examples of contingent unilateralism embedded in the framework governing the EU's emissions trading scheme. In relation to the first two examples, the EU has already decided to pursue this approach. In relation to the third and fourth examples, the EU is contemplating an approach of this kind.

The first example, and the one that forms the main point of reference for this article, is the EU's decision to include aviation emissions in its emissions trading scheme.⁴ Subject to limited exceptions, all flights taking off from or landing at an EU airport are covered by the scheme.⁵ For ETS-covered flights, operators are required to surrender emission allowances for each tonne of carbon dioxide generated during the relevant flight.⁶ This includes emissions that are generated outside EU airspace, and consequently airlines will be obliged to surrender emission allowances also for those parts

¹ In EU scholarship and policy discussions, the concept of a 'third country' is frequently used. Although its meaning is not immediately apparent, it has become a useful shorthand to refer to countries which are not Member States of the EU. For the sake of convenience, we will use this terminology here.

² See Dir. 2003/87 (as amended). A consolidated version of this directive is available at: http://ec.europa.eu/clima/policies/ets/documentation_en.htm (accessed 24 Feb. 2012).

³ See in particular Keohane and Victor, 'The Regime Complex for Climate Change', 9 *Perspectives on Politics* (2011) 7. For a broader discussion of unilateralism in environmental law see Shaffer and Bodansky, 'Transnationalism and Unilateralism in Environmental Law', 1 *Transnat'l Environmental L* (2012) 31.

⁴ See Dir. 2008/101/EC amending Dir. 2003/87, OJ (2008) L 8/3 and Arts 3a to 3g and 25a of the consolidated version of Dir. 2003/87, *supra* note 2.

⁵ See Annex I to the consolidated version of Dir. 2003/87, *supra* note 2, for a list of these exceptions.

⁶ A penalty of €100 per tonne of carbon dioxide will be incurred by airlines that fail to surrender the necessary allowances. The operator will still be required to surrender allowances to cover those emissions the following year. Where an operator fails to comply with the requirements of the directive and where other enforcement measures have failed, an operating ban may be imposed by the Commission on the airline concerned. See Art. 16(3) and (5)–(9) of the consolidated version of Dir. 2003/87, *supra* note 2.

of a flight that take place abroad. It has been pointed out that on a flight from San Francisco to London, 29 per cent of emissions will occur in US airspace, 37 per cent in Canadian airspace, 25 per cent over the High Seas, and that fewer than 9 per cent of emissions will occur in the EU.⁷

Nonetheless, airline operators may be exempted from the scheme where the flight in question departs from a third country that has itself adopted measures to reduce the climate change impact of flights.⁸ An exemption of this kind may be granted by the EU following consultation with the third country concerned, and the EU has insisted that it is 'ready to engage constructively in such consultations so as to reach agreement'.⁹ The Commission will also consider amending the directive if agreement on global measures to reduce international aviation emissions is achieved.¹⁰

Secondly, from the start of 2013 the EU will prohibit the use of Certified Emission Reductions (CERs) from new Clean Development Mechanism (CDM) projects in the ETS,¹¹ except in so far as these projects are either situated in Least-Developed Countries (LDCs) or originate in a country that has concluded an agreement with the EU regulating CERs' level of use.¹² CERs are a form of carbon offset that can be used to contribute to achieving compliance with a Member State's or a company's obligations under the ETS. From 2013, their 'importation' will be prohibited, other than from LDCs, unless an international agreement or a bilateral agreement regulating the conditions governing their 'production' has been put in place.

Thirdly, the recently revised Emissions Trading Directive creates a legal framework that provides for the possible inclusion in the ETS of imported products in energy-intensive sectors that are deemed to be exposed to significant risks of carbon

⁷ See Statement of Nancy N. Young, Vice President of Environmental Affairs, Air Transport Association of America, Inc. (ATA) before the Subcommittee on Aviation of the House Transportation and Infrastructure Committee, 'The European Union's Emissions Trading Scheme: A Violation of International Law' (27 July 2011), at 4–5, available at: republicans.transportation.house.gov/Media/file/TestimonyAviation/2011-07-27-%20Young.pdf (accessed 24 Feb. 2012).

⁸ Art. 25a of the consolidated version of Dir. 2003/87, *supra* note 2.

⁹ See 'Written Statement of Reservation by Belgium on behalf of the EU, its 27 Member States, and the 17 Other States Members of the European Civil Aviation Conference on Resolution A37-17/2: Consolidated Statement of continuing ICAO policies and practices related to environmental protection – Climate Change', available at: http://legacy.icao.int/icao/en/assembl/A37/Docs/10_reservations_en.pdf (accessed 24 Feb. 2012). At the time of writing no exemptions have been granted, though the Commission is said to be in discussions with Australia as a result of its recent adoption of a carbon tax.

¹⁰ Art. 25a(2) of the consolidated version of Dir. 2003/87 (*supra* note 2). An amendment would have to be adopted in accordance with Art. 192(2) TFEU.

¹¹ The Clean Development Mechanism was set up by Art. 12 of the Kyoto Protocol, 1997, to allow countries assuming emission reduction commitments to earn carbon offsets (CERs) by investing in emissions reduction projects in developing countries: see Kyoto Protocol to the UN Framework Convention on Climate Change, 10 Dec. 1997, 37 ILM (1998) 22 (hereinafter 'Kyoto Protocol'). The CDM was integrated into the ETS by way of a 'linking directive'. See Dir. 2004/101 OJ (2004) L 338/61 amending Dir. 2003/87.

¹² Art. 11a(5) of the consolidated version of Dir. 2003/87, *supra* note 2. CERs may also be used in the event that an international agreement on climate change is concluded. This Article puts in place a framework for moving towards a Sectoral Crediting Mechanism which could operate on the basis of an emissions baseline that is more ambitious than that represented by a business as usual approach.

leakage.¹³ In determining whether to include imported energy-intensive products in the ETS, the Commission is required to take into account the existence of ‘binding sectoral agreements which lead to global greenhouse gas emission reductions of the magnitude required to effectively address climate change’.¹⁴ While the EU has so far desisted from extending the application of the ETS to imported products in any of the sectors concerned, it is significant that a legal framework countenancing an extension of this kind has been put in place.¹⁵

Finally, the EU is currently consulting on the possible inclusion of maritime transport in the ETS.¹⁶ This consultation builds upon the statement in the preamble to the revised Emissions Trading Directive that unless the international community has approved an agreement by the end of 2011 that includes international maritime emissions in its reduction targets, the Commission *should* put forward a proposal to include these emissions in the European scheme.¹⁷ A Commission ‘Roadmap’ on measures to include maritime transport in the ETS suggests that all ships visiting EU and EEA ports would be included.¹⁸ Though conditions for the exemption of individual ships have not yet been defined, it is apparent that EU action is contingent upon there *not* being an adequate global agreement in place.

In each of these examples, EU climate unilateralism is contingent rather than absolute. The geographical extension, or the externalization, of the ETS can be avoided if the goods or services are subject to adequate climate change regulation, internationally or on the part of other states. The EU may be thought to be acting as a ‘norm entrepreneur’, using (the threat of) unilateral action to stimulate climate action

¹³ See Art. 10b(1)(b) of the consolidated version of Dir. 2003/87, *supra* note 2. Carbon leakage occurs when there is an increase in emissions in one country as a result of steps taken to reduce emissions in another country. The EU Emissions Trading Directive includes a threshold for assessing whether a sector or sub-sector is exposed to a significant risk of carbon leakage. This is based on calculating ETS-driven increases in production costs and intensity of trade with third countries. See Art. 10a(14)–(17). The list of relevant sectors drawn up by the Commission covers around one-quarter of the emissions included in the ETS and around 77% of total EU emissions from the manufacturing sector. See Commission Dec. 2009/2 (as amended), OJ (2009) L 1/10, determining a list of sectors and subsectors which are deemed to be exposed to a significant risk of carbon leakage.

¹⁴ Art. 10b(1) final para. of the consolidated version of Dir. 2003/87, *supra* note 2. For sectoral agreements to be taken into account in this way, they must be monitorable, verifiable, and subject to mandatory enforcement arrangements.

¹⁵ For a discussion see Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee, and the Committee of the Regions, Analysis of options to move beyond 20% greenhouse gas emission reductions and assessing the risk of carbon leakage, COM(2010)265 final (26 May 2010).

¹⁶ For the relevant documents see: http://ec.europa.eu/clima/news/articles/news_2012011901_en.htm (accessed 24 Feb. 2012). Emissions trading is just one of the four options outlined in the consultation questions.

¹⁷ See recital 3 of the consolidated version of Dir. 2003/87, *supra* note 2.

¹⁸ See Roadmap: Measures to include maritime transport emissions in the EU’s greenhouse gas reduction commitment if no international rules agreed, Version 2, 1, available at: http://ec.europa.eu/governance/impact/planned_ia/docs/2012_clima_001_greenhouse_maritime_transport_en.pdf (accessed 24 Feb. 2012). For a good discussion of the many issues arising see Faber *et al.*, ‘Technical Support for European Action to Reducing Greenhouse Gas Emissions from Maritime Transport’, CE Delft (Dec. 2009).

elsewhere.¹⁹ The contingency that characterizes EU climate unilateralism is key to understanding and evaluating the EU's approach. We will explore the concept of contingent unilateralism by looking at the aviation example in more depth.

We have chosen to focus on this example because it is already enshrined in EU legislation and the aviation extension has recently taken effect. The EU's Aviation Directive has already formed the subject matter of an unsuccessful action for judicial review,²⁰ and it has provoked many strong reactions, both in favour and against.²¹ While a number of non-governmental organizations have expressed strong and active support,²² a significant number of third countries have joined together to express their objections and to consider what kinds of retaliatory action they may take.²³ In a radical role reversal, the US House of Representatives has passed a bill to resist the application of the EU measure in the United States.²⁴ This prohibits US aircraft operators from participating in the ETS, and instructs US officials to negotiate or take any action necessary to ensure US aviation operators are not penalized by any unilaterally imposed EU scheme. In keeping with the primary theme of this article, the China Air Transport Association has condemned the EU scheme as contrary to the principle of common but differentiated responsibilities,²⁵ and India has levelled a similar charge.²⁶

¹⁹ See Finnemore and Sikkink, 'International Norm Dynamics and Political Change', 52 *Int'l Org* (1998) 887. Elsewhere, one of us used the concept of a 'regulatory penalty default' to capture this idea. See Scott, 'The Multi-Level Governance of Climate Change', 1 *Carbon and Climate L Rev* (2011) 25, at 27–33. See also Heal and Kunreuther, 'Tipping Climate Negotiations', National Bureau of Economic Research, Working Paper 16954 (Apr. 2011), available at: www.nber.org/papers/w16954 (accessed 24 Feb. 2012).

²⁰ Case C–366/10, *The Air Transport Association of America, American Airlines, Inc., Continental Airlines, Inc., United Airlines, Inc. v. The Secretary of State for Energy and Climate Change*, judgment of 21 Dec. 2011, not yet reported.

²¹ The Aviation Law Prof Blog is a very good place to keep up to date with developments. See: <http://lawprofessors.typepad.com/aviation/>.

²² A number of environmental groups intervened on behalf of the EU in the case pending before the ECJ. These included WWF-UK, the European Federation for Transport and Environment, and the US Environmental Defense Fund and Earthjustice. Jake Schmidt of NRDC has been active in blogging in favour of the EU's aviation decision. See: <http://switchboard.nrdc.org/blogs/jschmidt/> (accessed 24 Feb. 2012).

²³ For the most recent expression of this opposition and for a list of possible measures see the 'Joint Declaration of the Moscow Meeting on Inclusion of International Civil Aviation in the EU-ETS' adopted on 22 Feb. 2012. This was endorsed by 23 countries, and among the possible retaliatory measures contemplated is the possibility of launching legal action in ICAO or the WTO and of third countries adopting legislation prohibiting airlines from participating in the EU-ETS. It has been reported that the Chinese State Council has prohibited Chinese airlines from participating in the ETS without government approval and that the airlines may not use the ETS as a reason to raise their fares. See Buckley, 'China Joins Airlines from Joining EU Emissions Scheme' (6 Feb. 2012), available at: www.reuters.com/article/2012/02/06/us-china-eu-emissions-idUSTRE81500V20120206 (accessed 24 Feb. 2012).

²⁴ European Union Emissions Trading Scheme Prohibition Act 2011 (H.R. 2494) passed on 24 Oct. 2011. The EU has previously adopted 'blocking statutes' to guard against the extra-territorial effects of US legislation, most notably the Helms-Burton Act. See Huber, 'The Helms-Burton Blocking Statute of the European Union', 6 *Fordham Int'l LJ* (1996) 699.

²⁵ 'Statement by CATA on Inclusion of International Aviation in the EU ETS', available at: www.wcarn.com/list/13/13140.html (accessed 24 Feb. 2012).

²⁶ *Proposals by India for inclusion of additional agenda items in the provisional agenda of the seventeenth session of the Conference of the Parties*, FCCC/CP/2011/INF.2/Add.1 (7 Oct. 2011), at 6.

3 Contingent Unilateralism: The Example of Aviation

Aviation produces around 2 per cent of global emissions, a figure that could rise to 15–20 per cent in 2050.²⁷ These emissions are unregulated at the international level. While for developed countries *domestic* aviation emissions are counted towards their Kyoto Protocol targets, *international* aviation emissions are not. There is not even a settled framework at the international level for assigning responsibility for international aviation emissions to specific states.

The Kyoto Protocol provides that developed countries shall pursue the limitation or reduction of international aviation emissions working through the International Civil Aviation Authority (ICAO).²⁸ Progress in ICAO has, however, been exceedingly slow. While ICAO recently endorsed an ‘aspirational goal’ of annual fuel efficiency improvements in aviation of 2 per cent, no binding targets or objectives have yet been set.²⁹

It is against this backdrop of global regulatory inertia that the EU’s Aviation Directive should be viewed. Because it applies not only to intra-EU flights, but also to international flights arriving in and departing from the EU, the ETS has the potential to cover almost 60 per cent of international aviation emissions. It has been suggested that the Aviation Directive will lead to CO₂ emission reductions of 183 million tonnes in 2020,³⁰ and that the cost for airlines could be around €10.4 billion from 2012–2020.³¹

By including aviation in the ETS, the EU has adopted a unilateral measure of far-reaching significance. This is in part because the EU, acting unilaterally, has defined the geographical reach of its emissions trading scheme. It is also in part because the EU has asserted the privilege of determining unilaterally when, and on what basis, third

²⁷ The UK Committee on Climate Change, ‘International Aviation’, available at: www.theccc.org.uk/topics/international-action-on-climate-change/international-aviation (accessed 24 Feb. 2012).

²⁸ Art. 2(2), Kyoto Protocol. *supra* note 11.

²⁹ See ICAO, Res A37/19, Consolidated statement of continuing ICAO policies and practices related to environmental protection – Climate change, for a taste of the limited progress so far. This provides that states and international organizations will work through ICAO to achieve a global average fuel efficiency improvement of 2% *per annum* but it is based entirely on voluntary contributions by states. The EU has entered a reservation in relation to this, stating that ICAO’s ‘aspirational goal’ is insufficiently stringent and reiterating the EU’s goal of achieving a global reduction in aviation emissions of 10% by 2020 compared with 2005.

³⁰ Faber and Brinke, ‘The Inclusion of Aviation in the EU Emissions Trading Scheme: An Economic and Environmental Assessment’, ICTSD, Issue Paper No. 5 (Sept. 2011), at 9. Note that this is the emission reduction in the ETS as a whole, and it is largely caused by aviation buying allowances from other sectors.

³¹ These figures were produced by Thomson Reuters Point Carbon and assume a carbon allowance price of €12 per tonne. 85% of allowances will be issued free of charge but the allocation to individual airlines will depend upon the level of their historic emissions in 2004–2006. It is anticipated that larger European flag carriers with substantial long-haul networks will receive around 81% of the allowances they need free of charge in 2012. This compares with 63% in the case of Chinese airlines and 64% for US airlines. Nonetheless, it is suggested that the 27 flag carriers in the EU will receive, on average, 61% of the allowances they need free of charge in 2012. Dedicated freight carriers may receive 52% of their needs free in 2012. See ‘Cost for airlines of joining EU ETS €1.1bn in 2012, says Thomson Reuters Point Carbon’, *Point Carbon*, available at: www.pointcarbon.com/aboutus/pressroom/pressreleases/1.1583811 (accessed 24 Feb. 2012).

country departing flights should be exempted from being included in the scheme.³² While the EU will consult with the third country concerned, and while it will continue to negotiate on a multilateral basis within ICAO, ultimately it is for the EU to determine what is to count as 'good enough' when measures to tackle the climate change impact of aviation are agreed or adopted elsewhere.

The unilateral nature of the EU's Aviation Directive is reinforced in another, more subtle, way. In deciding which flights to include, the EU is required to make a unilateral determination as to the 'system boundary' that should apply to international aviation emissions.³³ In the absence of any international agreement on this point, the EU has settled upon a framework that allocates responsibility for aviation emissions to the departure state. Where the departure state fails to take responsibility for regulation aviation emissions, by adopting measures to reduce the climate change impact of these flights, the EU as the arrival state has asserted the right to step in. It is because of the way that the EU has chosen to draw the system boundary for aviation that its decision has proven to be so controversial.

The dominant system boundary in the global regulation of greenhouse gas emissions is production-based.³⁴ This allocates responsibility for emissions to the state in which the emissions are generated or produced. If emissions are generated as a result of producing steel in China, it is China that incurs responsibility for these regardless of where the steel is consumed. The influence of this production-based system boundary is apparent in the assertion that the EU's aviation decision is 'extra-territorial'. Viewed through the lens of a production-based system boundary, which posits the place in which the emissions are generated as the relevant territorial connecting factor, the EU's Aviation Directive adopts an extra-territorial approach.

However, as is already clear, the EU has, rightly,³⁵ rejected a production-based system boundary for aviation in favour of an alternative approach. While the EU's alternative does not eschew territoriality, it insists upon the relevance of a different territorial factor from that privileged by the dominant production-based approach. The territorial connecting factor to which the EU attaches importance is market access, be it for departing or landing flights. Only flights that depart from or land at

³² In order to exempt flights departing from a particular third country, the Commission will be required to act on the basis of a regulatory committee with scrutiny procedure. Thus the Commission will be overseen by a committee comprising Member States' representatives and a decision proposed by the Commission may be blocked by either the European Parliament or the Council of Ministers: see Art. 25a(1) of the consolidated version of Dir. 2003/87, *supra* note 2. Art. 25a(2) of the same directive goes on to provide that if an agreement on global measures to reduce international aviation emissions is achieved, the Commission shall consider whether amendments to the directive are required. Any amendments would have to be adopted in accordance with the procedure laid down in Art. 192(2) TFEU.

³³ The idea of a system-boundary in this setting is drawn from Peters, 'From Production-Based to Consumption-Based National Emission Inventories', 65 *Ecological Economics* (2008) 13.

³⁴ This is by no means uncontested. There is increasing pressure to integrate an element of consumption-based accounting into climate change. See, e.g., Davis and Caldeira, 'Consumption-based Accounting of CO₂ Emissions', 107 *Proc Nat'l Acad Sciences* (2010) 5687.

³⁵ It is readily apparent that a production-based system boundary is not adequate in relation to aviation as many emissions are generated in areas which are not subject to the jurisdiction of any state, e.g., over the High Seas.

an EU airport will be covered by the emissions trading scheme. The Aviation Directive may be extraterritorial when viewed through the lens of a production-based system boundary. However, it is merely differently territorial when it is viewed through a system boundary that posits market access (place of arrival or departure) as the key.³⁶

By contrast to some of these observers, we are not willing to condemn the EU on the basis that its Aviation Directive is unilateral or, from one perspective, extraterritorial. In a policy domain that is unregulated internationally, the EU is using its market power to prevent regulatory ‘liftoff’ and to achieve ‘juridical touchdown’.³⁷ It is doing so in a policy domain in which ‘domestic’ EU regulation can achieve substantial global reach, and in a way that may encourage similar climate action initiatives elsewhere. We are, however, critical of the EU’s approach in one important respect. We consider that the Aviation Directive fails to reflect adequately the demands of the principle of common but differentiated responsibilities and respective capabilities (CBDRRC). It is to this principle and to its role and relevance in the context of the Aviation Directive that we will turn now.

4 The Principle of Common but Differentiated Responsibilities and Respective Capabilities

The principle of common but differentiated responsibilities and respective capabilities (CBDRRC) lies at the heart of the international compact on climate change. It is articulated in Article 3 of the Framework Convention on Climate Change (FCCC),³⁸ and reiterated in numerous decisions taken by parties,³⁹ including the decision launching the negotiations that led to the Kyoto Protocol.⁴⁰

The CBDRRC principle establishes a common responsibility among states for protecting the climate system, but sanctions, in light of pervasive differences between states in their contributions to the stock of global greenhouse gases (GHG) and their economic capabilities, differences among states in their efforts to address climate change. It is

³⁶ Neither Kokott AG nor the ECJ accepted that the EU measure is extra-territorial. See *supra* note 20. The ECJ observed at para. 125 that the Aviation Directive does not infringe the principle of territoriality because the aircraft covered are physically present in the territory of one of the EU Member States. It also stressed (para. 129) that the EU can take steps to regulate within its territory even where the activity causing effects within its territory originates in an event that occurs partly outside. This is a crucial point. It reminds us that from the perspective of the EU, the fact that a flight lands in or takes off from an EU airport is relevant not only from the point of view of its enforcement jurisdiction, but from the point of view of its legislative or prescriptive jurisdiction as well.

³⁷ These terms are taken from Wai, ‘Transnational Liftoff and Juridical Touchdown: The Regulatory Function of Private International Law in an Era of Globalization’, 40 *Columbia J Int’l L* (2002) 209.

³⁸ UN Framework Convention on Climate Change, 29 May 1992, 31 ILM (1992) 849 (hereinafter ‘FCCC’).

³⁹ See, e.g., Dec. 1/CP.8, ‘Delhi Ministerial Declaration on Climate Change and Sustainable Development’, in FCCC/CP/2002/7/Add.1 (28 Mar. 2003), and Dec. 1/CP.13, ‘Bali Action Plan’, in FCCC/CP/2007/6/Add.1 (14 Mar. 2008) (hereinafter ‘Bali Action Plan’).

⁴⁰ Dec. 1/CP.1, ‘Berlin Mandate: Review of Adequacy of Articles 4, paragraph 2, sub-paragraph (a) and (b) of the Convention, including proposals related to a Protocol and decisions on follow-up’, in FCCC/CP/1995/7/Add.1 (6 June 1995) (hereinafter ‘The Berlin Mandate’).

worth noting that the CBDRRRC principle takes into account both current and historic contributions to the stock of global greenhouse gases. This is evident from preambular recitals to the FCCC that recognize, *inter alia*, that the ‘largest share of historical and current global emissions of greenhouse gases has originated in developed countries, that per capita emissions are still relatively low and that the share of global emissions originating in developing countries will grow to meet their social and development needs’.⁴¹

Although the CBDRRRC principle has come to play a pivotal role in international environmental law, the core content of the CBDRRRC principle, as well as the nature of the obligation it entails, is deeply contested. There are differing views on whether the basis for differentiation lies in differences in the level of economic development and capabilities, in contributions to GHGs in the atmosphere, or both. We would argue that it refers to both. If CBDRRRC refers to differentiation based on capability alone the use of the term ‘respective capabilities’ would be superfluous. It follows that FCCC Article 3 is intended to highlight differentiation based on two markers of differentiation – one based on capability, and the other, drawing from Rio Principle 7 which contains the authoritative definition of CBDR,⁴² based on contribution to global environmental harm.

There are also disagreements as to the nature of the obligation the CBDRRRC principle entails. While some argue that it obliges states to act in particular ways, others contend that it is merely a consideration that should be taken into account in the decision-making process. The disagreements over this principle’s content and the nature of the obligation it entails have spawned debates over its legal status.⁴³ It is our contention that even if this principle does not assume the character of a legal obligation in itself, it is a fundamental part of the conceptual apparatus of the climate change regime, such that it forms the basis for the interpretation of existing obligations and the elaboration of future international legal obligations within the regime in question. Indeed, it is arguable that any future legal regime must be consistent with the CBDRRRC principle in order to meet the requirements of the Convention, as well as the duties to perform and interpret a treaty in good faith. The fact that it is a fundamental part of the conceptual apparatus of the climate change regime also implies, in our view, that state parties are obliged not just to interpret current obligations and fashion new ones in keeping with the CBDRRRC principle, but also to take this principle into account in their unilateral actions *vis-à-vis* other parties.

Admittedly, there are and will be difficulties in applying this principle. Given the divergent interpretations of the CBDRRRC principle it is unclear what this principle requires, and how parties are to apply it.⁴⁴ But these difficulties, we argue, are not

⁴¹ Preambular recital 3, FCCC, *supra* note 38.

⁴² Principle 7, Rio Declaration on Environment and Development, in Report of the UN Conference on Environment and Development, Rio de Janeiro, 3–14 June 1992, A/CONF.151/26 (1992), i, 31 ILM (1992) 874.

⁴³ See, e.g., P. Birnie, A. Boyle, and C. Redgwell, *International Law & the Environment* (3rd edn, 2009), at 135.

⁴⁴ For a recent analysis of differing applications of CBDRRRC suggested by Parties see Rajamani, ‘The Reach and Limits of the Principle of Common but Differentiated Responsibilities and Respective Capabilities in the Climate Change Regime’, in N.K. Dubash (ed.), *Handbook of Climate Change and India: Development, Politics and Governance* (2011), at 118.

insurmountable. The CBDRRRC principle manifests itself in the climate regime in several ways. It manifests itself in provisions that differentiate between developed and developing countries with respect to *implementation*,⁴⁵ such as delayed compliance schedules, permission to adopt subsequent base years,⁴⁶ delayed reporting schedules,⁴⁷ and softer approaches to non-compliance.⁴⁸ It also manifests itself in provisions that grant *assistance, inter alia*, financial⁴⁹ and technological.⁵⁰ Further, and more controversially, it manifests itself in provisions that differentiate between developed and developing countries with respect to the *central obligations* contained in the treaty, such as emissions reduction targets and timetables.⁵¹ While differential treatment in relation to implementation and assistance has found widespread support among parties, differential treatment in central obligations has been disputed from the start. Indeed the US rejection of and the gradual distancing of many developed countries from the Kyoto Protocol⁵² can be sourced to an objection to this form of differential treatment in favour of developing countries. In recent years, parties have arrived at numerous agreements and decisions including the non-binding Copenhagen Accord, 2009,⁵³

⁴⁵ See, e.g., Preambular provisions of the Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa, 17 June 1994, 33 ILM (1994) 1328, 1994; FCCC, *supra* note 38; and UN Framework Convention on Biological Diversity, 2 June 1992, 31 ILM (1992) 818.

⁴⁶ See, e.g., Art. 3(5), Kyoto Protocol, *supra* note 11.

⁴⁷ See, e.g., Art. 2(5), FCCC, *supra* note 38.

⁴⁸ See, e.g., Procedures and Mechanisms Relating to Compliance under the Kyoto Protocol, in FCCC/CP/2001/13/Add.3 (21 Jan. 2002).

⁴⁹ See, e.g., Art. 13(2) of The Stockholm Convention on Persistent Organic Pollutants, 22 May 2001, 40 ILM (2001) 532; Art. 20(2), Convention to Combat Desertification, *supra* note 45; Art. 20, Convention on Biological Diversity, *supra* note 45; and Art. 4(3), FCCC, *supra* note 38.

⁵⁰ See, e.g., Art. 16 Convention on Biological Diversity, *supra* note 45; Art. 4, FCCC, *supra* note 38; Art. 18, Convention to Combat Desertification, *supra* note 45; Art. 27(2), International Tropical Timber Agreement, 10 Jan. 1994, 88 ILM (1994) 1014; Art. 4(2), Vienna Convention for the Protection of the Ozone Layer, 22 Mar. 1985, 26 ILM (1985) 1529 (hereinafter, 'The Vienna Convention 1985'); Art. 10(3), The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, 22 Mar. 1989, 28 ILM (1989) 657; and Art. 10A, The Montreal Protocol on Substances that Deplete the Ozone Layer, 16 Sept. 1987, 26 ILM (1987) 1550 (hereinafter 'The Montreal Protocol, 1987').

⁵¹ See, e.g., Art. 3, Kyoto Protocol, *supra* note 11.

⁵² Russia and Japan have formally indicated their intention not to assume targets under the Kyoto Protocol's second commitment period: see Letter to Ms C Figueres, Executive Secretary of the UNFCCC, from the Head of Roshydromet, National Climate Change Coordinator, The Russian Federation, 8 Dec. 2010, available at: http://unfccc.int/files/meetings/cop_15/copenhagen_accord/application/pdf/russian_federation_cph10.pdf (accessed 24 Feb. 2012); and, Letter to Ms C Figueres, Executive Secretary of the UNFCCC, from the Japanese Ambassador for COP16 of the UNFCCC, 10 Dec. 2010, available at: http://unfccc.int/files/meetings/ad_hoc_working_groups/kp/application/pdf/japan_awgkp15.pdf (accessed 24 Feb. 2012); Canada has formally withdrawn from the Kyoto Protocol: see Canada: Withdrawal, Kyoto Protocol to the UN Framework Convention on Climate Change, CN796.2011.TREATIES-1 (Depositary Notification), 16 Dec. 2011, available at: http://unfccc.int/files/kyoto_protocol/background/application/pdf/canada.pdf.pdf (accessed 24 Feb. 2012).

⁵³ Dec. 2/CP.15, 'Copenhagen Accord', in FCCC/CP/2009/11/Add.1 (30 Mar. 2010) (hereinafter 'Copenhagen Accord').

the Cancun Agreements, 2010,⁵⁴ and the Durban Platform, 2011,⁵⁵ that have sought to erode differentiation and achieve greater parallelism or symmetry across developed and developing countries, in particular in central obligations.⁵⁶ However, it is not differentiation more generally or the CBDRRRC principle that is in disfavour, but the particular variant of it found in the Kyoto Protocol. The CBDRRRC principle and most forms of differentiation are still in play, and will remain central to the future climate regime.

Also of relevance to an examination of the EU's Aviation Directive is a corollary to the CBDRRRC principle, FCCC Article 4(7), which notes that 'the extent to which developing countries will effectively implement their commitments under the Convention will depend on the effective implementation by developed country Parties of their commitments under the Convention related to financial resources and transfer of technology, and will take fully into account that economic and social development and poverty eradication are the first and overriding priorities of developing country Parties'. This suggests not just that developing country mitigation actions are dependent on developed country actions on finance and technology, but also that the flow of finance is expected to be *from* developed *to* developing countries.⁵⁷ It is perhaps in keeping with this notion that fleshes out the CBDRRRC principle that the Secretary-General's High Level Advisory Group on Climate Finance arrived at the criterion of 'no net incidence' on developing countries in evaluating sources and instruments to raise climate finance.⁵⁸

It is against this backdrop of the CBDRRRC principle and related provisions in the climate regime that the EU's Aviation Directive must be examined.

5 The EU's Aviation Directive and CBDRRRC

A Does the Principle of CBDRRRC Apply to the EU's Aviation Directive?

While the Impact Assessment accompanying the Commission's proposal for the Aviation Directive argued that the directive would be in full conformity with the

⁵⁴ The Cancun Agreements, 2010, comprise Dec. 1/CP.16, 'The Cancun Agreements: Outcome of the work of the Ad Hoc Working Group on long-term Cooperative Action under the Convention', in FCCC/CP/2010/7/Add.1 (15 Mar. 2011); and, Dec. 1/CMP.6, 'The Cancun Agreements: Outcome of the work of the Ad Hoc Working Group on Further Commitments for Annex I Parties under the Kyoto Protocol at its fifteenth session', in FCCC/KP/CMP/2010/12/Add.1 (15 Mar. 2011).

⁵⁵ Dec. 1/CP.17, 'Establishment of an Ad Hoc Working Group on a Durban Platform for Enhanced Action', in FCCC/CP/2011/9/Add.1 (15 Mar. 2012) (hereinafter 'The Durban Platform').

⁵⁶ Rajamani, 'The Durban Platform & the Future of the Climate Regime', 61 *Int'l & Comp LQ* (2012) 1.

⁵⁷ Art. 4(3) and 4(5), FCCC, *supra* note 38, buttresses this point, as it imposes obligations on developed countries to provide finance and technological assistance to developing countries.

⁵⁸ Report of the Secretary-General's High Level Advisory Group on Climate Change Financing, 5 Nov. 2010, available at: www.un.org/wcm/content/site/climatechange/pages/financeadvisorygroup (accessed 24 Feb. 2012). The notion of 'no net incidence' on developing countries has been considered by parties. It was articulated in an early draft of the Durban – LCA decision, 2011, but did not survive in the final decision: see Update of the amalgamation of draft texts in preparation of a comprehensive and balanced

principle of CBDRRC,⁵⁹ the Commission has argued more recently that the principle does not apply.⁶⁰ The Commission argues that this principle applies to states and to the climate measures they take, while the ETS applies only to businesses active in the EU market and not to states. We will begin by considering the validity of the EU's argument that in this setting the principle of CBDRRC does not apply.

It is our view that the EU's argument about the non-application of CBDRRC rests upon a characterization of the Aviation Directive that fails to capture its full extent. While the directive does apply to airlines active within the EU market, requiring them to surrender allowances as set out above, it also 'applies' to states. It does so because the application of the directive to a business (an airline) depends in part upon the behaviour of the airline's home state. Where a third country adopts climate mitigation measures that meet the EU's unilaterally imposed conditions, flights departing from this third country may be excluded from the ETS. The EU's Aviation Directive is consequently a developed country measure that makes demands both of EU-active businesses *and* of their home states. Thus, when the EU considers granting a partial exemption for incoming flights from the ETS, and when it evaluates the environmental effect of third country measures put in place, the principle of CBDRRC should certainly apply. This is a point to which we will return below.

Also, we do not accept that the principle of CBDRRC ceases to be relevant when the EU adopts unilateral climate change measures, even when these measures are directed at businesses that are active in the EU. Indeed, we argued above that this principle forms a fundamental part of the conceptual apparatus of the climate change regime and that parties have an obligation to take it into account. The premises underpinning the EU's claim to the contrary are far from clear. There is no suggestion that CBDRRC is not relevant when *developing countries* sign up to or adopt climate change measures that are directed at developing country businesses active in the market of the EU. CBDRRC also remains relevant in relation to developing country measures, even when these measures are sector-specific rather than economy-wide.⁶¹ Why then should EU sector-specific measures be treated differently in this respect?

outcome to be presented to the Conference of the Parties for adoption at its seventeenth session, FCCC/AWGLCA/2011/CRP.38 (7 Dec. 2011), at 40, available at: unfccc.int/resource/docs/2011/awglca14/eng/crp38.pdf (accessed 24 Feb. 2012).

⁵⁹ Commission of the European Communities, 'Impact Assessment of the inclusion of aviation activities in the scheme for greenhouse gas emission allowance trading within the Community', SEC(2006)1684 (20 Dec. 2006) (hereinafter 'Final Impact Assessment'), at 52.

⁶⁰ Presentation by A. Runge-Metzger, Aviation and Emissions Trading, ICAO Council Briefing (29 Sept. 2011), at 40, available at: http://ec.europa.eu/clima/policies/transport/aviation/docs/presentation_icao_en.pdf (accessed 24 Feb. 2012).

⁶¹ The EU seems to accept that the principle of CBDRRC would remain applicable even where developing countries regulate business activity directly by setting or agreeing to a sectoral emissions baseline in the context of a Sectoral Crediting Mechanism. The EU stresses that higher capability developing countries would be expected to set more ambitious sectoral baselines, and that this would be in accordance with the principle of CBDRRC: see Ad Hoc Working Group on Long-term Cooperative Action (AWG-LCA), 'Views on the Elaboration of Market-Based Mechanisms', Submissions by Hungary and the European Commission on behalf of the EU and its Member States, in FCCC/AWGLCA/2011/MISC.2 (21 Mar. 2011), at 48, 55.

The EU's claim that CBDRRC does not apply in relation to the Aviation Directive seems to rest on the fact that the directive was adopted by the EU. It appears to be based on the identity of the actor enacting the measure as opposed to the material impact that the measure will have. When a developing country endorses a sector-specific mitigation commitment, CBDRRC applies. When the EU uses market access as an instrument to 'encourage' sector-specific greenhouse gas reductions, it is the EU's view that CBDRRC ceases to apply. While the EU has not explained why CBDRRC should not apply to unilateral EU measures, its emphasis upon the fact that the Aviation Directive is directed at businesses that are *active in the EU market* gives some indication of its thinking and intent.

The EU's attempt to constrain the application of the principle of CBDRRC in relation to businesses active in the EU is driven by competitiveness concerns. The EU has been commendably open in acknowledging the importance of these concerns, and the role that they play in driving an equal treatment as opposed to a differentiation-based approach.⁶² These concerns are particularly pronounced against the backdrop of a Kyoto-style understanding of CBDRRC that would let even the richest 'developing' countries (and their airlines) entirely off the hook. We recognize the validity of these concerns. Nonetheless, in implementing its Aviation Directive it would have been open to the EU to adopt a more nuanced understanding of CBDRRC; one predicated upon differentiation between countries as opposed to crude differentiation between developed and developing country blocs. Also, as we explore below, it is possible to conceive of ways of incorporating respect for CBDRRC within the EU's Aviation Directive that are capable of accommodating competitiveness concerns.

B Does the EU's Aviation Directive Respect the Principle of CBDRRC?

What then of the argument put forward in the EU's Impact Assessment that the Aviation Directive is 'fully in line with the principle of "common but differentiated responsibilities" under the UNFCCC'.⁶³ There are reasons to question this conclusion and the arguments that the Impact Assessment makes.

The EU's Aviation Directive applies both to businesses and to states. On the one hand, it takes the form of a unilateral decision to include airlines in the emissions trading scheme. On the other hand, this unilateral extension is contingent in the sense that a non-EU country can apply for an exemption for flights that depart from it where the country in question has itself taken adequate steps to reduce the climate change impact of flights. In the light of this, it is necessary to investigate whether the EU's Aviation Directive leaves any room for differential treatment of either developing country *businesses* or developing country *states*.

Turning first to the treatment of developing country airlines, it is clear that the Aviation Directive is premised on the equal treatment of all airlines, regardless of nationality.⁶⁴ All airlines whose activities fall within the scope of the ETS will incur

⁶² See, e.g., Presentation by Runge-Metzger, *supra* note 60, at 31.

⁶³ Final Impact Assessment, *supra* note 59, at 52.

⁶⁴ This is a point emphasized by the European Commission in its presentation on the Aviation Directive: see Presentation by Runge-Metzger, *supra* note 60, at 21.

the same obligation in the form of a requirement to surrender one allowance for each tonne of carbon that they emit. The Aviation Directive does not provide for the differential treatment of airlines, regardless of whether they come from China, the EU, or Ethiopia.

When it comes to developing countries, as opposed to developing country airlines, the Aviation Directive is more ambiguous. Ultimately, the question whether the directive respects the principle of CBDRRC will depend upon how the conditions for exemption are interpreted and applied. Recall that for a non-EU country to gain exemption from the ETS for flights which *depart* from it,⁶⁵ the country in question must take measures to reduce the climate change impact of these flights.⁶⁶ This requirement is noticeably vague.

In its original proposal, the Commission suggested that an exemption for a non-EU country should be made conditional upon the adoption by it of measures which are at least equivalent to the requirements laid down in the Aviation Directive.⁶⁷ This reference to equivalence was dropped by the Council when it reached political agreement on the proposal, and the reference to equivalence does not appear in the Common Position adopted on 18 April 2008.⁶⁸ However, the final version of the directive does include a reference to equivalence in its preamble:

If a third country adopts measures, which have an environmental effect at least *equivalent* to that of this Directive, to reduce the climate impact of flights to the [EU], the Commission should consider the options available in order to provide for optimal interaction between the Community scheme and that country's measures, after consulting with that country.⁶⁹

Preambles included in EU legislation do not have binding legal force and they cannot serve as a ground for derogating from the main body of the relevant act.⁷⁰ Nonetheless, where there is no contradiction between the preamble and the main body of the directive, the preamble may be used to 'cast light on the interpretation to be given to a legal

⁶⁵ There is no possibility for flights departing from the EU to be exempted from the scheme. As previously discussed, the EU's system boundary places primary responsibility for international aviation emissions on the departure state.

⁶⁶ Art. 25a of the consolidated version of Dir. 2003/87, *supra* note 2.

⁶⁷ See Commission of the European Communities, Proposal for a Directive of the European Parliament and of the Council amending Dir. 2003/87/EC so as to include aviation activities in the scheme for greenhouse gas emission allowance trading within the Community, COM(2006)818 (20 Dec. 2006), at 21.

⁶⁸ See Commission of the European Communities, Communication from the Commission to the European Parliament pursuant to the second subpara. of Art. 251(2) of the EC Treaty concerning the common position of the Council on the adoption of a Directive of the European Parliament and of the Council amending Dir. 2003/87/EC so as to include aviation activities in the scheme for greenhouse gas emission allowance trading within the Community, COM(2008)221final (22 Apr. 2008) where it is observed that '[t]he Commission's proposal provides for flights arriving from third countries to be exempt if they are covered by equivalent measures in those countries. The Council's common position provides for a more *flexible* approach to finding the best option to ensure interaction between the Community scheme and measures taken in a third country. The Commission supports this approach' (emphasis added), at 4.

⁶⁹ Rec. 17 of Dir. 2008/101, *supra* note 4.

⁷⁰ Case C-162/97, *Criminal proceedings against Gunnar Nilsson, Per Olov Hagelgren and Solweig Arrborn* [1998] ECR I-07477, at para. 54.

rule'.⁷¹ This suggests that the European Commission would not be legally precluded from applying an equivalence test when assessing whether the conditions for exemption have been met. In an answer given to the European Parliament, it was suggested by the EU's Commissioner for Climate Action that the concept of equivalence does form the basis of the applicable test.⁷²

The concept of equivalence can of course be understood in a number of different ways. Equivalence may be evaluated on the basis of effort commensurate with resources, or on the basis of outcome regardless of the relative effort made. Nonetheless, the preamble to the directive may be thought to exhibit a preference for an outcome-based approach. For an exemption to be made available, third country measures are required to achieve an environmental *effect* at least equivalent to that of the directive. In the light of this, while any final evaluation of the EU's Aviation Directive from the point of view of CBDTRC will depend upon how the criteria for exemption are interpreted and applied, the emphasis upon equivalence would seem to suggest that equal treatment, not differentiation, will be the guiding principle in this respect.

It is then our contention that the Aviation Directive is not consistent with the principle of CBDTRC in respect of its application to businesses, and it is *probably* not consistent in so far as it applies to states. Our conclusion regarding the compatibility of the EU's Aviation Directive with the principle of CBDTRC is not altered as a result of the arguments put forward in the EU's Impact Assessment. Nonetheless, these arguments will be considered below.

As previously noted, the Impact Assessment stressed that the Aviation Directive would be fully in line with the principle of CBDTRC.⁷³ Its first argument is very brief. It states simply that '[i]ncorporation of aviation emissions from routes to/from EU airports into the EU ETS would first of all be a measure taken by the Community [EU] as an Annex I Party to the UNFCCC'.⁷⁴ This is in essence an argument that CBDTRC does not apply to a unilateral measure adopted by an Annex I party, even where that measure places demands on operators from developing countries and, ultimately, on developing countries themselves. This is an argument that we have discussed and rejected above.

The Impact Assessment goes on to stress that developed country airline operators will bear a larger proportion of the costs of complying with the Aviation Directive because of their relatively higher market share on EU-ETS covered routes.⁷⁵ Indeed, the economic impact on world regions that include developing countries is anticipated

⁷¹ Case 215/88, *Casa Fleischhandel v. Bundesanstalt für Landwirtschaftliche Marktordnung* [1989] ECR 2789, at para. 31. The ECJ emphasized that nonetheless the preamble could not itself constitute a rule not contained in the main body of the legislation. Note that the reference to equivalence appears in other language versions of the dir. as well, including at least the French, Italian, Spanish, and German versions.

⁷² See Ms. Hedegaard's answer to a written question (P-005387/2011 posed by Holger Kraemer) on aviation in the European emissions trading scheme at: www.asd-europe.org/site/fileadmin/user_upload/news/EU_news_150711a.pdf (accessed 24 Feb. 2012). Recall again though the ambiguity inherent in the current directive on this point. We will argue below that the EU should exploit the extra flexibility that the exclusion of equivalence from the main body of the directive provides.

⁷³ Final Impact Assessment, *supra* note 59, at 52.

⁷⁴ *Ibid.*

⁷⁵ *Ibid.*

to be modest.⁷⁶ For example, the cost for African airlines is anticipated to be between €2 million and €35 million per year.⁷⁷ One estimate suggests that the cost to all airlines in 2012 could be as much as €1.125 billion.⁷⁸

We do not wish to deny that evidence of disparate impact is important, but equally we do not consider that it is sufficient to support the claim that the Aviation Directive is consistent with the principle of CDDRRC. This is because the burden imposed on airlines depends principally on the emissions they generate on ETS-covered routes. In the language of CDDRRC, it is the scale of a country's current *responsibility* for emissions that is taken into account, while its historic responsibilities and relative economic capabilities are not. It is important to stress that there is no necessary correlation between current responsibility for emissions and these other factors that are relevant in giving effect to the principle of CDDRRC.

To illustrate this point: 98 ICAO states are currently not covered by the ETS, either because they do not have a commercial operator with flights to the EU or because they fall beneath the *de minimis* threshold laid down.⁷⁹ Nonetheless, 18 'low-capability' countries have carriers included in the ETS.⁸⁰

It is also the case that the correlation between a country's share of ETS-covered emissions and its economic capability judged by relative GDP is rather hit and miss.⁸¹ Thus, for example, South Korea produces the same volume of ETS-covered emissions

⁷⁶ Note that the analysis is based upon a scenario of including only EU-departing flights in the ETS, whereas both departing and arriving flights have been included.

⁷⁷ This would depend upon the volume of allowances to be auctioned and the price of allowances. The comparable figure for the Far East, which includes both China and Japan, was between €8 million and €151 million.

⁷⁸ Standard & Poor's, 'Airline carbon costs take off as EU emissions regulations reach for the skies' (18 Feb. 2011), at 2, available at: www.environmental-finance.com/download.php?files/pdf/4d663c478efb8/Airline%20Carbon%20Costs%20take%20off.pdf (accessed 24 Feb. 2012).

⁷⁹ See sub-para. (j) of the aviation section of Annex I to the consolidated version of Dir. 2003/87, *supra* note 2. This exempts flights performed by a commercial air transport operator who operates either fewer than 343 flights per period for three consecutive four-month periods or with total annual emissions lower than 10,000 tonnes per year.

⁸⁰ Müller, 'From Confrontation to Collaboration? CDDR and the EU-ETS Aviation Dispute with Developing Countries', *Oxford Energy and Environment Brief* (Feb. 2012), at 14, available at: www.oxfordenergy.org/2012/03/from-confrontation-to-collaboration-cbdr-and-the-eu-ets-aviation-dispute-with-developing-countries/ (accessed 24 Feb. 2012). Here, Müller is using the concept of relative capability and defining it in terms of relative wealth as measured by GDP. Müller also introduces the concept of absolute capability which is determined by the overall size of the economy and the number of people with less than \$2 per day. He argues that both types of capability should be viewed as relevant in operationalizing the principle of CDDRRC.

⁸¹ For country-by-country emissions shares see the Presentation by Runge-Metzger, *supra* note 60, at 41. For GDP see statistics on National Accounts (including GDP), available at: <http://databank.worldbank.org/databank/download/GDP.pdf> (accessed 24 Feb. 2012) for the country concerned. See also Müller, *supra* note 80, for a more detailed analysis of the correlation between the costs of complying with the Aviation Directive and CDDRRC. He points out that relatively small adjustments of up to 5.3% of the total economic costs of complying with the Aviation Directive would be required to ensure that developing countries do not incur a share of the costs that is higher than would be implied by the principle of CDDRRC. However, Müller accepts that this analysis relates only to the direct costs of purchasing

as Japan, while its relative GDP is only 18 per cent. Malaysia produces around 88 per cent of the ETS-covered emissions generated by Switzerland, with a GDP of around 45 per cent. Disparities of this kind are not confined to developed and developing country partnerships. The South African economy is around 20 per cent of the size of the Indian economy while its ETS-covered emissions are almost half. The Thai economy is around 5 per cent of the size of the Chinese economy, but its ETS-covered emissions are one-third. In some circumstances the correlation between ETS-covered emissions and GDP is closer or even good. However, the key point is that any correlation is contingent and in no way written into the fabric of the scheme.

There is another argument contained in the final Impact Assessment which, although not framed in the language of CBDRRC, may be relevant to the discussion nonetheless. In assessing the social impacts of the proposal, the Impact Assessment points out that 'while the impacts of climate change tend to create most difficulties for people in poorer regions of the world, increased ticket prices resulting from the EU ETS will be predominantly borne by the wealthier segments of the population, both within the EU and globally'.⁸² It is pointed out that flying is still the preserve of the well-off and that it is not credible to claim that higher ticket prices will hit poorest people the hardest.

Although not presented by the European Commission in these terms, this discussion brings to mind the concept of 'intra-national common but differentiated responsibility'; a concept explored by Greenpeace India in a controversial report entitled 'Hiding Behind the Poor'.⁸³ This report argued that the significant carbon emissions of a relatively small wealthy class in India are camouflaged by the vastly smaller emissions of the Indian poor.⁸⁴ While the report argues in favour of differentiation of responsibilities between developed and developing countries, it also argues in favour of differentiation of responsibilities between rich and poor *people* as well.

The EU seems to accept that at present CBDRRC is only concerned with the distribution of the climate burden between states. It does not seek to draw a link between its observations on the social impacts of the Aviation Directive and CBDRRC, or to argue in favour of a unilateral re-drawing of the boundaries of this principle. For this reason, we make just one remark.

allowances, and does not reflect the total impact of including aviation in the ETS on developing country economies (*ibid.*, at 13). While his analysis is very valuable, it does not alter the basic fact that because the EU does not accept that CBDRRC is relevant in this setting, no mechanism is in place to evaluate the compatibility of the Aviation Dir. with this principle or to design/adjust the functioning of the system to ensure respect.

⁸² Final Impact Assessment, *supra* note 59, at 36.

⁸³ Greenpeace India, 'Hiding Behind the Poor: A Report by Greenpeace on Climate Injustice (2007), available at: www.greenpeace.org/india/Global/india/report/2007/11/hiding-behind-the-poor.pdf (accessed 24 Feb. 2012). For a critical discussion see Chakravarty and Ramana, 'The Hiding Behind the Poor Debate: A Synthetic Overview', in Dubash (ed.), *supra* note 44, at 218.

⁸⁴ The carbon emissions of even the wealthiest top 1% in India were at this time just below the global *per capita* average of 5 tonnes. In 2007, *per capita* EU emissions were 8.8 tonnes while India's *per capita* emissions were 1.3 tonnes.

Any claim that a climate mitigation measure may be justified on the basis that it is the global rich and not the poor who will be required to pay needs to be based on clear evidence, and the impact of the measure needs to be monitored in order to assess its distributive effects. The EU's Impact Assessment is far from being a benchmark for good practice in this respect.

The Impact Assessment acknowledges that there is limited data on the socio-economic distribution of air transport users.⁸⁵ It then extrapolates its conclusions from data from the United Kingdom and from the fact that 'far less than 5–10% of the world's inhabitants use air transport at least once per year'.⁸⁶ It does not examine the socio-economic distribution of air transport users in developing countries.

It is also the case that there is little consideration given to the development impact of including air freight in the EU ETS. The preliminary Impact Assessment stressed that air freight tends to comprise high value goods, 'the consumption of which can be assumed to be relatively greater in higher income classes than in lower income classes'.⁸⁷ Nonetheless, the Impact Assessment stops short of assessing the price-sensitivity of consumer markets for air-freighted goods or the potential for the Aviation Directive to reduce the development benefits of carrying goods by air, including in relation to the prominent example of developing country (especially African) horticultural trade.⁸⁸ Other studies have recognized that import substitution may occur as a result of increasing transportation costs in respect of imports.⁸⁹ While it may not be possible to estimate quantitatively the impact of the Aviation Directive on trade, it has been suggested that small island developing states and landlocked countries may be among those most vulnerable to its effects.⁹⁰ This at least highlights the possibility that while the costs of the Aviation Directive will be borne *predominantly* by the rich, the global poor may suffer negative impacts as well; a possibility that the various impact assessments do not refute.

While the European Commission expresses a commitment to monitor airline ticket prices to ensure that price increases are not disproportionate to the costs of airlines

⁸⁵ Final Impact Assessment, *supra* note 59, at 35.

⁸⁶ *Ibid.*, at 36.

⁸⁷ Commission Staff Working Document, Annex to the Communication from the Commission 'Reducing the Climate Change Impact of Aviation', Impact Assessment, SEC(2005)1184 (27 Sept. 2009), at 37.

⁸⁸ The Preliminary Impact Assessment merely observes, 'Given the modest price increases envisaged, the buoyancy of this segment [freight] of the sector, and the relatively high value of goods involved, the most likely initial impact would be a marginal reduction in the rate of growth': *ibid.*, at 36. For a study showing the development benefits of air freight in relation to African horticultural trade see Garside, MacGregor, and Vorley, 'Review of Food Miles, Carbon and African Horticulture: Environmental and Developmental Issues', COLEACP (Comité de Liaison Europe-Afrique-Caraïbes-Pacifique) (undated), available at: <http://pip.coleacp.org/files/documents/PIP%20food%20miles%20report%20for%20web.pdf> (accessed 24 Feb. 2012).

⁸⁹ See, e.g., Farber and Brinke, *supra* note 30.

⁹⁰ *Ibid.*, at 14. ICAO estimates that \$100 spent on air transport produces benefits worth \$325 for the economy and 100 additional jobs in air transport result in 610 new economy wide jobs, as cited in 'Strategic Plan: 2010–2015', Ministry of Civil Aviation, Government of India, New Delhi, available at: http://civilaviation.gov.in/cs/groups/public/documents/newsandupdates/moca_000783.pdf, at 2 (accessed 24 Feb. 2012).

participating in the ETS,⁹¹ it makes no commitment to monitor the impact of the Aviation Directive on the world's vulnerable and poor or, where necessary, to take corrective steps.

C What Steps Should the EU Take to Ensure Respect for the Principle of CDDRRC?

We propose two amendments to the EU's Aviation Directive in order to ensure respect for the principle of CDDRRC.⁹² Each of these proposals calls, in different ways, for the differential treatment of developing country flights. It is therefore necessary at the outset to define which countries are to count as developing countries and which flights are to count as developing country flights.

Turning first to the question of which countries should be considered developing countries, the FCCC includes a list of developed country parties and economies in transition in Annex I. Conceived as a means to distinguish between developed and developing country parties, Annex I gives rise to some anomalies. Indeed, it excludes some of the richest countries in the world.⁹³ Notwithstanding these anomalies, we propose that in taking steps to reform the Aviation Directive the EU should treat all non-Annex I countries as developing countries.⁹⁴ While this may seem counter-intuitive, it is reasonable to adopt this stance because of the nature and implications of the two reform proposals we set out below. As will become clear, these proposals are inherently capable of responding to the profound differences in the levels of development of the individual countries that make up the broad developing country group.

Turning to the question of which flights should be considered as developing country flights, while no 'system boundary' for international aviation emissions has been agreed on a multilateral basis, a system boundary has been established by the EU's Aviation Directive nonetheless. As was already explored, this draws a definitive link between the EU and international aviation emissions that are generated by *EU-departing flights*. On the contrary, the directive draws a merely provisional link between the EU and international aviation emissions that are generated by *third-country departing flights*. For third-country departing flights, inclusion in the ETS is contingent upon the third country in question *not* having taken EU-approved measures to reduce the climate impact of these flights. In the light of this, the system boundary established by the Aviation Directive is departure-based. It is the country

⁹¹ Final Impact Assessment, *supra* note 59, at 36.

⁹² As will become clear, we are not proposing the *a priori* exclusion of developing country flights from the ETS. Nor are we proposing that developing country airlines be accorded more generous access to Clean Development Mechanism Certified Emissions Reductions (CERs). The current limits on access for the aviation sector are set out in Art. 11a and especially Art. 11a(8). This provides that the overall use of credits shall not exceed 50% of the Community-wide reductions below the 2005 levels of new sectors and aviation over the period from the date of their inclusion in the Community scheme to 2020.

⁹³ Such as Kuwait, United Arab Emirates, Brunei, Singapore, and Qatar which are among the top 20 richest countries in the world, and Mexico, South Korea, and Chile which are members of the OECD.

⁹⁴ Needless to say, the EU should take account of any amendments to the relevant Annexes. E.g., Malta has recently been added to the list of Annex I countries as a result of its accession to the EU.

from which a flight departs that has responsibility for the emissions generated during this flight. It is only when the departure state fails to accept responsibility that the arrival state will step in. On this basis, we argue that *all* flights departing from developing countries should be viewed as developing country flights. It is consequently the point of departure of a flight rather than the nationality of the airline that should be determinative in this respect.

Our first proposal designed to ensure that the EU's Aviation Directive respects the principle of CBDRRRC calls upon the EU to differentiate between countries in terms of the conditions that apply for gaining exemption from the ETS. Differentiation of this kind could be reflected in the terms of an international agreement on reducing emissions from the aviation sector negotiated under the auspices of ICAO.⁹⁵ For example, a different timetable for the progressive achievement of emission reductions could be put in place for flights that depart from different states.

In the absence of international agreement, in order to benefit from an exemption third countries are required to take measures to reduce the climate change impact of flights. We propose that different countries should be required to make different emissions reduction commitments; and that the EU should differentiate not only between developed and developing country blocs, but between individual developing countries as well. Developed countries, such as Canada and the United States, should be required to adopt measures to reduce the climate change impact of flights that are at least equivalent in terms of their environmental effect to those of the EU. Developing countries, by contrast, should be required to adopt measures to reduce the climate change impact of flights that are commensurate with their respective responsibilities and capabilities.

It would fall to the EU to elaborate precise criteria to assess the responsibility and capability of an individual developing country, and to define the level of attainment that their aviation-focused climate mitigation measures must achieve in order to gain exemption. In order to reduce the administrative burden associated with differentiation of this kind, the selected criteria must be capable of being applied on the basis of data that are accessible and reliable. A country's responsibilities could, for example, be assessed by reference to current and historic emissions, while a country's capabilities could be evaluated by reference to *per capita* GDP.⁹⁶

Needless to say, the selection of the applicable objective criteria will necessarily be a subjective and controversial exercise. For example, the selection of an appropriate

⁹⁵ Recall that Art. 25a(2) of Dir. 2003/87 (*supra* note 2) provides that if agreement on global measures to reduce international aviation emissions is achieved, the Commission shall consider whether amendments to the Aviation Directive are required. The Commission could decide to exempt those signing up to this agreement from inclusion in the ETS.

⁹⁶ Emphasis upon the capability limb of CBDRRRC is also a reflection of the fact that Art. 4(7) of the FCCC recognizes that poverty eradication and socio-economic development are overriding priorities for developing countries. The World Bank classifies countries according to income group. The groups are: low income, \$1,005 or less; lower middle income, \$1,006–\$3,975; upper middle income, \$3,976–\$12,275; and high income, \$12,276 or more. The classifications are updated on 1 July each year. These classifications could be useful in reducing the complexity of differentiation of this kind.

cut-off date for determining responsibilities for historic emissions – whether from the industrial revolution or from 1990 when the FCCC was negotiated – is a subjective and political exercise.⁹⁷ However, if a suitably wide set of representative criteria are chosen in relation to responsibility and capability, drawn, *inter alia*, from those criteria suggested by parties in the ongoing climate negotiations,⁹⁸ these may find greater acceptance. The advantage of an approach built on a representative set of objective criteria is that the most advanced developing countries would incur a climate mitigation burden which is close or equal to that of the EU. To take just one example, Singapore is a non-Annex I party under the FCCC. Nonetheless, on a *per capita* basis, its historic emissions in 1980 were higher than those of the EU,⁹⁹ its current emissions are higher than those of the EU, and its GDP significantly outstrips that of the EU. Consequently, on this basis, measures adopted by Singapore to reduce the climate change impact of flights could be expected to achieve an environmental effect at least equivalent to that of the EU. China by contrast had, on a *per capita* basis, vastly lower historic emissions in 1980 compared with the EU, has significantly lower *per capita* emissions today, and compared with the EU, China has a relatively modest *per capita* GDP. Giving equal weighting to these three criteria, China's mitigation burden would (in percentage terms) be around one-third of that of the EU.

A proposal of this kind would not give rise to 'national treatment' type discrimination,¹⁰⁰ because it would not treat EU airlines more favourably than airlines from other states. For example, all airlines flying from Delhi to the EU would be treated in exactly the same way. This is an important consideration, both from the point of view

⁹⁷ See, e.g., Müller, Höhne, and Ellermann, 'Differentiating (Historic) Responsibilities for Climate Change', Summary Report (Oct. 2007), available at: www.oxfordclimatepolicy.org/publications/documents/DifferentiatingResponsibility.pdf (accessed 24 Feb. 2012).

⁹⁸ In their submissions to the FCCC various countries have suggested indicative 'objective' criteria including: GDP *per capita*, see Submission of Australia, in FCCC/AWGLCA/2008/MISC.1/Add.2 (2 Mar. 2008), at 8; Submission of Japan, in FCCC/AWGLCA/2008/MISC.2 (14 Aug. 2008), at 16; Submission of Turkey, in FCCC/AWGLCA/2008/MISC.5/Add.2 (Pt II) (10 Dec. 2008), at 68; relative rates of economic and population growth, stage of economic development, structuring of economies' emissions, recognition of regional realities and interdependencies, relative mitigation potential, and costs over time: see Submissions of Canada, in FCCC/AWGLCA/2008/MISC.1/Add.2 (20 Mar. 2008), at 10; OECD membership, stages of economic development, capacity to respond, and emission share in the world: see Submission of Japan, in FCCC/AWGLCA/2008/MISC.1/Add.1 (12 Mar. 2008), at 11, and in FCCC/AWGLCA/2008/MISC.2 (14 Aug. 2008), at 16; primary energy consumption *per capita*, emissions *per capita*, population growth, Human Development Index, historical responsibility, and energy intensity: see Submission of Turkey, in FCCC/AWGLCA/2008/MISC.5/Add.2 (Pt II) (10 Dec. 2008), at 67, and global emissions and economic development: see Submissions of US, in FCCC/AWGLCA/2008/MISC.5/Add.2 (Pt II) (10 Dec. 2008), at 67. See also Experts from BASIC Countries, 'Equitable Access to Sustainable Development, Contribution to the Body of Scientific Knowledge – A Paper by Experts from BASIC Countries' (2011), at 12–15, available at: www.erc.uct.ac.za/Basic_Experts_Paper.pdf (accessed 24 Feb. 2012).

⁹⁹ As noted, the EU would have to make some sensitive choices about the criteria to be applied. Singapore's emissions were higher than the EU's in 1980 but significantly lower than the EU's in 1960.

¹⁰⁰ National treatment requires the equal treatment of domestic goods or operators as compared to foreign goods or operators. For a clear expression of this principle see General Agreement on Tariffs and Trade (GATT) 1947, Art. III. For a general discussion of discrimination and other aspects of WTO law in relation to the Aviation Directive see Bartels' contribution to this volume.

of assuaging competitiveness concerns in the EU and to ensure compliance with international law.

A proposal of this kind would, however, give rise to ‘most-favoured-nation’ (MFN) type discrimination, in that it would impose a harsher burden on more advanced developing countries by comparison with the burden imposed on less developed developing states.¹⁰¹ While this would raise an issue of WTO compatibility, it is highly likely that discrimination of this kind could be justified, so long as the key disciplines laid down by the WTO Appellate Body in the *EC – Tariff Preferences* (GSP) case were observed.¹⁰² It would thus be critical for the EU to elaborate objective criteria for differentiating between different developing countries and to ensure that these criteria were transparently and consistently applied.¹⁰³ It would also be important for the EU to ensure that its system for differentiating between different developing countries operates in a flexible way.¹⁰⁴ In keeping with this, it would be necessary for the EU to update the results of its CBDRRRC assessment on a regular basis and to allow third countries to set in train a review of the EU’s CBDRRRC assessment on the basis that the criteria have been improperly applied or that the results of their application are significantly out of date.

The Commission claims that discrimination between operators on the basis of nationality would be incompatible with the Chicago Convention.¹⁰⁵ Nonetheless, while the Chicago Convention is committed to the principle of non-discrimination, its terms are sufficiently flexible to accommodate the principle of CBDRRRC.¹⁰⁶ We know from experience in the WTO that the concept of non-discrimination can be interpreted in different ways, and there is also a strong argument to suggest that while the Chicago Convention prohibits nationality discrimination, it does not prohibit the differential treatment of operators who are flying different routes.¹⁰⁷

¹⁰¹ MFN-type discrimination is concerned with differences in the treatment of foreign goods and services originating in different countries. For one example see Art. I.I, GATT.

¹⁰² *European Communities – Conditions for the Granting of Tariff Preferences to Developing Countries*, Report of the Appellate Body, AB-2004-1, WT/DS246/AB/R (7 Apr. 2004).

¹⁰³ *Ibid.*, at paras 182–189. It is worth noting here that the Aviation Dir. is characterized by a lack of transparency in that there is ambiguity surrounding the applicable benchmark for exemption. Also, if exemption is to depend upon the third country in question taking measures with an environmental effect at least equivalent to the EU, then it is necessary for the EU to set out precisely what the extent of the environmental effect of the Aviation Directive is anticipated to be.

¹⁰⁴ *Ibid.*

¹⁰⁵ Convention on International Civil Aviation, signed at Chicago, on 7 Dec. 1944 (hereafter ‘the Chicago Convention’). See Runge-Metzger, *supra* note 60, at 40.

¹⁰⁶ Note that the ECJ found that the EU is not bound by the Chicago Convention, *supra* note 105, and that hence it does not form a basis for examining the validity of the Aviation Dir. (*supra* note 20, at paras 57–71).

¹⁰⁷ See especially Art. 11 of the Chicago Convention, *supra* note 105, which provides that national laws and regulations are to be applied to the aircraft of all contracting parties without distinction as to nationality. In keeping with the WTO’s approach in the GSP case (*supra* note 102) it is possible to argue that distinctions that are drawn on the basis of objective criteria relevant to the application of CBDRRRC are not nationality-based distinctions, and that, at any rate, route-based distinctions treat all airlines in the same way regardless of their nationality.

It is also salient to observe that 'ICAO has in practice taken a flexible approach' when it comes to the differential treatment of developed and developing states.¹⁰⁸ ICAO's Policy and Guidance Material on the Economic Regulation of International Air Transport contains an Appendix that sets out the kind of preferential measures that may be taken in favour of developing countries.¹⁰⁹ ICAO's aircraft noise regulations seek to accommodate the needs of developing countries by giving them more time to comply with the relevant obligations and by providing that the special circumstances of developing country airlines are to be taken into account, for example through the provision of time-limited economic hardship exemptions.¹¹⁰ And it is fascinating to see that in a jointly prepared study, ICAO and the United Nations World Tourism Organisation (UNWTO) reached a broad conclusion on differentiation which is not unlike that of the Appellate Body of the WTO. It concludes that special treatment must be justified by a well-defined purpose, by reference to transparent and objective criteria, and should not entail discrimination among airlines.¹¹¹ In order to achieve this, and consistency with the Chicago Convention, a route-based approach rather than a nationality-based approach to differentiation should be preferred.¹¹²

Our first proposal would also raise questions of legality in EU law. Nonetheless, we would argue that even if the equivalence criterion is to be applied by the EU in assessing third country eligibility for exemption from the ETS,¹¹³ this concept should be read in the light of the principle of CBDRRC. For developing countries equivalence should be understood as a relative concept, and a developing country's mitigation burden should be calculated by reference to its relative responsibilities and capabilities. For a poor country's climate mitigation measures to be considered as equivalent in terms of their environmental effect to those of a rich country, a smaller absolute contribution should be required. This is in keeping with the idea that the equal treatment of countries that are differently situated according to accepted criteria may necessitate formal differences in the treatment that they receive.¹¹⁴ Of course, if our relativist reading of

¹⁰⁸ Lyle, 'Kyoto v. Chicago: ICAO Debates on How to Apply the Principle of Common but Differentiated Responsibilities to Aviation', available at: www.greenaironline.com/news.php?viewStory=450 (accessed 24 Feb. 2012).

¹⁰⁹ Appendix 3. For a discussion see: P. Forsyth, *Competition and Predation in Aviation Markets* (2005), at 64.

¹¹⁰ For a discussion of this and of the parallels between the regulation of noise and emissions see ICAO, 'Review of Aviation Emissions Related Activities within ICAO and Internationally: Parallels between Noise and CO2 Environmental Goals', (GIACC/3-IP/1-7/01/09), available at: http://legacy.icao.int/icao/en/atb/meetings/GIACC/2009/Giacc_3/Docs/Giacc3_ip01_en.pdf (accessed 24 Feb. 2012).

¹¹¹ 'A study of an essential service and tourism development route scheme', available at http://legacy.icao.int/icao/en/atb/epm/ecp/EssentialServicesStudy_en.pdf (accessed 24 Feb. 2012).

¹¹² Lyle, *supra* note 108, at 2. He also notes that a route-based approach forms the basis of proposals on CBDR(RC) put forward by the Association of European Airlines and the Aviation Global Deal Group.

¹¹³ This is by no means inevitable, given that while the concept was included in the main body of the Commission's original proposal for a directive, it was removed from it by the EU legislature in the final version. As noted previously, the only reference that remains is included in the directive's preamble.

¹¹⁴ *US – Import Prohibition on Certain Shrimp and Shrimp Products*, Report of the Appellate Body, AB-1998-4, WT/DS58/AB/R. See especially para. 165, where the Appellate Body observed that '[w]e believe that discrimination results not only when countries in which the same conditions prevail are differently treated, but also when the application of the measure at issue does not allow for any inquiry into the appropriateness of the regulatory program for the conditions prevailing in those exporting countries.'

the concept of equivalence were to be deemed unconvincing by the CJEU, an amendment to the directive's preamble would be required.

Our second proposal to enhance respect for CBDRRRC is more straightforward, and less controversial.¹¹⁵ We consider that it would be appropriate for the revenues raised as a result of the inclusion of developing country flights in the ETS to be committed to a global climate fund,¹¹⁶ and for these revenues to be used to finance climate mitigation and adaptation activities in developing countries.¹¹⁷ By taking a broad conception of what is to count as a developing country and of the concept of a developing country flight, a greater proportion of aviation-ETS revenues would be committed as expenditure in developing countries in this way. Notice what we are *not* proposing here. We are not arguing that revenues should be repatriated to the developing country from which the specific flight departs.¹¹⁸ On the contrary, we are arguing that all revenues derived from all developing country flights should be committed to a global fund and should be distributed to developing countries in accordance with the governance arrangements and the funding criteria that the fund in question has put in place.

¹¹⁵ We will frame our proposal narrowly in a bid to overcome political objections to the general idea of requiring ETS revenues to be used to tackle climate change. However, we would favour broader hypothecation of ETS-generated revenues to tackle climate change mitigation and adaptation in developing countries. The UK government is opposed to hypothecation of ETS revenues. Note, however, that the Confederation of British Industry and other business leaders have called on the UK to use proceeds to tackle climate change: see Murray, 'CBI calls for carbon credit cash to be ring fenced', available at: www.business-green.com/bg/news/1802048/cbi-calls-carbon-credit-cash-ring-fenced (accessed 24 Feb. 2012). The EU Council recently reiterated at its 3148th meeting (Press Release of 21 Feb. 2012) that carbon pricing of international aviation and maritime transport has the potential to generate large revenue flows, and invited the Commission to prepare a reflection paper by June 2012 on carbon pricing of this kind, taking international developments into account. It is not clear whether the reference to revenue flows is to global market-based measures or to the EU emissions trading scheme as well.

¹¹⁶ Ideally, this would be the Green Climate Fund, designated as an operating entity of the Financial Mechanism of the FCCC, in accordance with Art. 11 of the FCCC, *supra* note 38; see the Dec. 3/CP.17, 'Launching the Green Climate Fund', in FCCC/CP/2011/9/Add.1 (15 Mar. 2012).

¹¹⁷ Recall that, at present, Member States have no obligation to hypothecate revenues in this way. The directive merely provides that they *should* use the revenues to tackle climate change in *the EU and in third countries*.

¹¹⁸ A total exemption for developing country flights would undermine the capacity of EU unilateral action to perform a catalyst function in promoting climate action internationally or on the part of third countries. Also, contrast our proposal with the maritime rebate proposal put forward by the International Maritime Emission Reduction Scheme (IMERS). See Stochniol, 'Optimal Rebate Key for an Equitable Maritime Emission Reduction Scheme' (May 2011), available at: www.imers.org/docs/rebateKey.pdf (accessed 24 Feb. 2012). For a more recent argument in favour of special treatment for developing countries in the context of international market-based mechanisms for aviation and shipping see Keen, Perry, and Strand, 'Market-Based Instruments for International Aviation and Shipping as a Source of Climate Finance', World Bank Policy Research Working Paper Series No. 5950 (Jan. 2012), available at: www-wds.worldbank.org/external/default/WDSContentServer/WDS/IB/2012/01/17/000158349_20120117140509/Rendered/PDF/WPS5950.pdf (accessed 24 Feb. 2012). Here it is suggested that '[d]eveloping countries ought to be able to keep their own tax revenue, and additional compensation to them for the economic burdens of these carbon charges may be warranted'. Our proposal is driven by a desire to find a way of preserving the catalyst function of EU contingent unilateralism, while respecting the principle of CBDRRRC.

The current Emissions Trading Directive provides that it is for Member States to determine how the revenues derived from auctioning allowances are to be used.¹¹⁹ By contrast to the Commission's more emphatic proposal, it states merely that these revenues *should* be used to tackle climate change, in both the EU and developing countries.¹²⁰ Our proposal differs from this in three crucial ways. First, according to our proposal, hypothecation of revenues would be required. Secondly, our proposal is limited to those revenues which accrue as a result of the inclusion of aviation in the ETS and the inclusion of developing country flights. This is because it is driven by the principle of CBDRRC, and by the concept of no-net incidence for developing countries that this is increasingly thought to entail.¹²¹ Thirdly, the exclusive focus of our proposal is on the funding of mitigation and adaptation activities that are situated in developing countries. It has been suggested that it is not appropriate for the EU to determine national public expenditure allocations, and that for it to do so would be contrary to the principle of subsidiarity.¹²² We would argue that our more narrowly tailored proposal is capable of overcoming this subsidiarity objection, because it is necessary to ensure respect for a principle (CBDRRC) that has already been endorsed by both the EU and its Member States.

6 Conclusion

The EU is engaged in an ambitious strategy of contingent unilateralism. This is most apparent in its decision to include aviation in its ETS. This strategy extends the global reach of EU climate change law and seeks to use the EU's market share as a means to stimulate climate action, globally and on the part of individual states. Although the EU's Aviation Directive has the potential to cover more than half of the world's international aviation emissions, it is based on the principle of equal treatment and the EU argues that the principle of CBDRRC does not apply. This highlights a crucial question concerning the distribution of the mitigation burden arising from unilateral action on climate change.¹²³ We have argued that the principle of CBDRRC should retain

¹¹⁹ Art. 3d(4) of the consolidated version of Dir. 2003/87, *supra* note 2.

¹²⁰ For the Commission's original proposal see COM(2006)818 final. Art. 3c(4) states that the revenues *shall* be used to mitigate greenhouse gas emissions, to adapt to the impacts of climate change, to fund research and development for mitigation and adaptation, and to cover the costs incurred by Member States in administering the scheme. The European Parliament also favoured hypothecation of revenues, and it placed special emphasis upon the financing of activities in developing countries. It was the Council, reportedly at the behest of the UK government, that insisted upon weakening the commitment to hypothecation, a matter in relation to which the Commission expressed its regret.

¹²¹ *Supra* note 58.

¹²² Ares, 'EU ETS and Aviation' (13 Feb. 2012), available at: www.parliament.uk/briefing-papers/SN05533.pdf (accessed 24 Feb. 2012).

¹²³ For a good, more abstract, discussion see Eckersley, 'The Politics of Carbon Leakage and the Fairness of Border Measures', 24 *Ethics and International Affairs* (2010) 367. Our focus in this article is upon the distribution as between states because this is the concern raised by CBDRRC. We are sympathetic to the EU's argument that the burden of including aviation in the ETS will fall predominantly on rich people, regardless of whether they live in a rich or poor country, and we recognize that it would have been open to the EU to try to link this argument to a reformed understanding of CBDRRC. However, the EU did not seek to make this link and, as we previously observed, the analysis of the social impact of the Aviation Directive included in the Final Impact Assessment (*supra* note 59, at 35–36) was quite thin.

relevance in the context of unilateral action and that respect for this principle can be ensured in a manner that is responsive to competitiveness concerns and consistent with the demands of international law. As our proposals also show, it would be possible for the EU to take the principle of CBDRRC into account, while treating all airlines and passengers flying on the same route in the same way. By refusing to countenance the relevance of this principle in this setting, there is a danger that the EU will miss the opportunity to shape our understanding about what this evolving and contested principle should mean and require. It would be open to the EU to interpret and apply the Aviation Directive in a manner that is consistent with this principle, and we have put forward two concrete suggestions as to how this could be achieved.