LEGAL ANALYSIS ON THE INCLUSION OF CIVIL AVIATION IN THE EUROPEAN UNION EMISSIONS TRADING SYSTEM
The mission of the Centre for International Sustainable Development Law (CISDL) is to promote sustainable societies and the protection of ecosystems by advancing the understanding, development and implementation of international sustainable development law.

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1. Introduction

This Working Paper identifies legal issues raised by the inclusion of greenhouse gas emissions from aviation activities in the European Union’s Emissions Trading System. A recent ruling by the European Court of Justice upholding the validity of the measures adopted by the European Union has added to the ongoing discussion.

Beginning with an overview and comment on the ruling of the European Court of Justice, this Working Paper addresses the interactions and tensions between international law on aviation and on climate change, including the role of the International Civil Aviation Organization in regulating greenhouse gas emissions from aviation. It also summarizes the position of China in opposing the European measures, preferring a global policy solution to the regulation of aircraft emissions.

2. Case Comment - Ruling on the Legality of the EU Emissions Trading System

The European Court of Justice (hereinafter the “ECJ”) sitting as Grand Chamber upheld the validity of Directive 2008/101 (the “Directive”) in Air Transport Association v. SS for Energy and Climate Change, in response to a reference for a preliminary ruling under Article 267 of the Treaty on the Functioning of the European Union (hereinafter the “TFEU”) from the High Court of Justice of England and Wales, Queen’s Bench Division (Administrative Court). This reference concerned the validity of the Directive, which amended Directive 2003/87 to include greenhouse gas emissions from aviation activities in the European Union Emissions Trading System (the “EU ETS”). Broadly, the ECJ ruling addressed two questions, the first being the conditions under which international treaties and customary international law principles could be relied on when assessing the validity of European Community law, and the second being the validity of the Directive in this context.

2.1 Airline Industry Perspectives

The airline industry strongly opposed the inclusion of aviation activities within the EU ETS or more specifically the inclusion of emissions by non-EU carriers outside EU territory. The main legal arguments brought before the ECJ were the following:


5. See Decision, supra note 2, para. 1.

6. In this section ‘airline industry’ refers to the International Air Transport Association (IATA) and the National Airlines Council of Canada (NACC). IATA and NACC are trade associations which, respectively, represent the airlines which account for approximately 93% of all scheduled international airline services (IATA) and Canada’s four largest passenger air carriers (NACC): An interveners’ brief submitted to the European Court of Justice („ECJ“) by the International Air Transport Association (IATA) and the National Airlines Council of Canada (NACC), Case
The EU breaches international treaty obligation as Article 2(2) of the Kyoto Protocol to the United Nations Framework Convention on Climate Change provides that the International Civil Aviation Organization ("ICAO") has "exclusive responsibility" for reducing greenhouse gas emissions from the international aviation sector and thus that the EU as a signatory of the Kyoto Protocol must work through ICAO. Similarly, the parties to the EU/US Open Skies Agreement agreed to pursue emissions trading measures "within the framework of ICAO".

The EU breaches international customary law (reflected, inter alia, in the Chicago Convention on International Civil Aviation (the "Chicago Convention"), the EU/US Open Skies Agreement and other bilateral agreements), as the EU "applies the ETS to those parts of flights which take place outside the airspace of EU Member States and thereby subjects the territory of other states and the high seas to EU sovereignty". By requiring aircraft operators to surrender emission allowances for international flights crossing EU boundaries when flying to and from European aerodromes the ETS imposes extraterritorial obligations on foreign airlines and thus contravenes the fundamental principle of state sovereignty.

The EU breaches the Chicago Convention (and other EU bilateral agreements) as the scheme imposes either an illegal charge or an illegal tax on aircraft operators: According to Article 15 of the Chicago Convention any imposition of a charge other than for the use of airports and air navigation facilities is prohibited. Since the EU ETS imposes a charge on take-off or landing that is not related to the associated airport or navigational costs it constitutes an illegal charge under the Chicago Convention. If the EU ETS does not impose an illegal charge (which is denied), then it imposes at least an illegal tax, because emissions are linked to the use of fuel and Article 24 of the Chicago Convention as well as the EU/US Open Skies Agreement provide that fuel shall be exempt from duties etc.

C-366/10, pg. 1 (Executive Summary), online: <airlinecouncil.ca/pdf/EU ETS Legal Challenge IATA_NACC Brief_Final /21 Oct 2010>. [Airline industry]

9 Airline industry, supra note 17, para (7), (34) and (40).
10 Ibid., para (38) and (39).
11 Ibid., para (30), (31) and (38).
12 Ibid., para (40).
13 Article 15 (Airport and similar charges) Chicago Convention: ... “Any charges that may be imposed or permitted to be imposed by a contracting State for the use of such airports and air navigation facilities by the aircraft of any other contracting State shall not be higher,
(a) As to aircraft not engaged in scheduled international air services, than those that would be paid by its national aircraft of the same class engaged in similar operations, and
(b) As to aircraft engaged in scheduled international air services, than those that would be paid by its national aircraft engaged in similar international air services.
All such charges shall be published and communicated to the International Civil Aviation Organization; provided that, upon representation by an interested contracting State, the charges imposed for the use of airports and other facilities shall be subject to review by the Council, which shall report and make recommendations thereon for the consideration of the State or States concerned. No fees, dues or other charges shall be imposed by any contracting State in respect solely of the right of transit over or entry into or exit from its territory of any aircraft of a contracting State or persons or property thereon.”
14 Airline industry, supra note 17, para (35).
15 Ibid., para (36); Article 24 (Customs duty) Chicago Convention: “(a) Aircraft on a flight to, from, or across the territory of another contracting State shall be admitted temporarily free of duty, subject to the customs regulations of the State. Fuel, lubricating oils, spare parts, regular equipment and aircraft stores on board an aircraft of a contracting State, on arrival in the territory of another
Furthermore, the airline industry was of the opinion that the EU ETS imposes obligations on other nations as well as on third country nationals and that by doing so the EU acts in breach of public international law as it expanded the ETS without these third parties consent.\textsuperscript{16}

\subsection{International Treaties and Customary International Law Principles}

The ECJ held that the following customary international law principles applied to its analysis of the validity of the Directive:

- Each State has sovereignty over its airspace;
- No part of the high seas may come under the sovereignty of a State; and
- Freedom to fly over the high seas is guaranteed.\textsuperscript{17}

With respect to applicable international treaty law, the ECJ identified Articles 7, 11(1), 11(2)(c), and 15(3) read in conjunction with articles 2 and 3(4) of the \textit{United States – European Union Air Transport Agreement} (hereinafter the “Open Skies Agreement”).\textsuperscript{18}

In its judgment, the ECJ addressed the question of whether the inclusion of emissions from aviation activities in the EU ETS constitutes a duty, tax, fee or charge on the fuel load, and as such prohibited under the \textit{Chicago Convention} of 1944 and the Open Skies Agreement.\textsuperscript{19} On this point, the ECJ held that this was not the case, concluding rather that the EU ETS is a market-based measure ("MBM").\textsuperscript{20} In reaching this conclusion, the ECJ differentiated between a levy or tax based on fuel held or consumption and a pecuniary burden on the aircraft’s operation under the EU ETS.\textsuperscript{21}

\subsection{The Role of the Chicago Convention in the ECJ Ruling}

The ECJ held that the Directive could not be assessed in light of the Chicago Convention, noting that although all EU Member States were parties to the Chicago Convention, the EU itself was not.\textsuperscript{22} Specifically, the ECJ concluded that although the first paragraph of Article 351 of the TFEU implies a duty on the part of EU institutions not to impede the performance of the obligations of Member States under the Chicago Convention,\textsuperscript{23} that duty is designed to ensure contracting States and retained on board on leaving the territory of that State shall be exempt from customs duty, inspection fees or similar national or local duties and charges. This exemption shall not apply to any quantities or articles unloaded, except in accordance with the customs regulations of the State, which may require that they shall be kept under customs supervision.

(b) Spare parts and equipment imported into the territory of a contracting State for incorporation in or use on an aircraft of another contracting State engaged in international air navigation shall be admitted free of customs duty, subject to compliance with the regulations of the State concerned, which may provide that the articles shall be kept under customs supervision and control.”

\textsuperscript{16} Airline industry, \textit{supra} note 17, para (34).
\textsuperscript{17} See \textit{ibid.}, para. 111.
\textsuperscript{20} See \textit{Decision}, \textit{supra} note 2, para. 147; \textit{Open Skies Agreement}, \textit{supra} note 18, art. 11.
\textsuperscript{21} See \textit{Decision}, \textit{supra} note 2, para. 147.
\textsuperscript{22} See \textit{Decision}, \textit{ibid.}, paras. 141 – 147.
\textsuperscript{23} See \textit{ibid.}, paras. 3, 60.
\textsuperscript{24} TFEU, \textit{supra} note 3, art. 351.
that EU Member States continue to exercise their powers under the Chicago Convention and does not bind the EU in that regard.\textsuperscript{25}

The decision of the ECJ to not consider the Chicago Convention in its analysis of the validity of the Directive in light of international treaty law has been viewed as controversial in light of the fundamental place of the Chicago Convention in international civil aviation. The Chicago Convention, often described as the “Constitution”\textsuperscript{26} of international civil aviation,\textsuperscript{27} established the International Civil Aviation Organization (“ICAO”\textsuperscript{28}) as the global forum for cooperation among its 191 Member States in all fields of civil aviation,\textsuperscript{29} and is the primary source of public international air law.\textsuperscript{30} Milde observed that “[t]he provisions of the [Chicago] Convention are mandatory since there is no provision permitting any reservations to the Convention. The mandatory nature of the Convention is underlined by Article 82 in which Contracting States committed themselves to abrogate any inconsistent obligations and understandings and not to enter into any such obligations or understanding.”\textsuperscript{31}

Considering the provisions of the Open Skies Agreement,\textsuperscript{32} an air services agreement, but not those of the Chicago Convention, while determining the validity of a measure that affects international civil aviation, is controversial in light of the fact that all air services agreements, whether bilateral or multilateral, are authorized and governed by the Chicago Convention.\textsuperscript{33} Another approach would have been for the ECJ to consider Article 11 of the Chicago Convention as this provision has been reproduced in article 7(1) of the Open Skies Agreement without the phrase “Subject to the provisions of [the Chicago] Convention.”\textsuperscript{34} An Article 11

\textsuperscript{25} See Decision, supra note 2, para. 61.

\textsuperscript{26} Dempsey argues that “[a]ny chronological review of the development of international aviation law must begin with the “Constitution” of international civil aviation, the Chicago Convention of 1944”. Paul Stephen Dempsey, Public International Air Law (Montreal: McGill University, Institute and Center for Research in Air & Space Law, 2008) at 69.

\textsuperscript{27} Ibid.

\textsuperscript{28} Ibid. at 49.

\textsuperscript{29} See online: ICAO in brief, ICAO <http://www.icao.int/Pages/icao-in-brief.aspx> (visited February 29, 2012).

\textsuperscript{30} Michael Milde, “International Air Law and ICAO” in Marietta Benkö, ed., Essential Air and Space Law, vol. 4 (Utrecht, Netherlands: Eleven International Publishing, 2008) at 17. Giemulla admired the Chicago Convention by stating that “[l]egal globalization of aviation is only possible under the principle of ‘internationalism’ (as opposed to ‘supranationalism’) through the following:

- a convention in which the members pledge to comply with or implement decisions reached together (by majority).

\textsuperscript{31} Milde, ibid. at 18 [footnote omitted].

\textsuperscript{32} Open Skies Agreement, supra note 18.

\textsuperscript{33} Article 6, which authorizes the conclusion of air services agreements, provides that “No scheduled international air service may be operated over or into the territory of a contracting State, except with the special permission or other authorization of that State, and in accordance with the terms of such permission or authorization.” Chicago Convention, supra note 19, art. 6.

\textsuperscript{34} Chicago Convention, supra note 19, art. 11; Open Skies Agreement, supra note 18, art. 7(1). Article 11 of Chicago Convention, supra note 19, provides:

Subject to the provisions of this Convention, the laws and regulations of a contracting State relating to the admission to or departure from its territory of aircraft engaged in international air navigation, or to the operation and navigation of such aircraft while within its territory, shall be applied to the aircraft of all contracting States without distinction as to nationality, and shall be complied with by such aircraft upon entering and departing from or while within the territory of that State.

\textsuperscript{Ibid.}, art. 11.

Article 7(1) of Open Skies Agreement, supra note 18, provides:

The laws and regulations of a Party relating to the admission to or departure from its territory of aircraft engaged in international air navigation, or to the operation and navigation of such aircraft while within its territory, shall be
analysis would have required the ECJ to consider other provisions of the Chicago Convention due to the phrase “Subject to the provisions of [the Chicago] Convention”, 35 and enhanced the significance of the judgment as an analysis of international treaty law. 36

2.4 The Role of the Kyoto Protocol in the ECJ Ruling

The Court held that the Kyoto Protocol, in particular Article 2(2), 37 could not be taken into account when assessing the validity of the Directive. 38 It must be borne in mind that the very basis of the EU ETS, an MBM, is the Kyoto Protocol, 39 which is expressed in the Directive and was acknowledged by the ECJ. 40 Although the EU is a party to both the UNFCCC and the Kyoto Protocol and, hence, these two international agreements are binding on the EU institutions and must prevail over EU law in accordance with article 216(2) of the TFEU, 41 the ECJ refused to consider these agreements applying the criteria established through its own jurisprudence. 42 Interestingly, at one point, this Court referred to the same agreements to bolster its own submission leading to the holding that the Directive was valid. 43 It is surprising to find that a legislation that has been enacted to conform to international obligation(s) arising from international agreement(s) cannot be evaluated in light of the same agreement(s) unless some criteria, not emerging from the same agreement(s), are met.

...
2.5 Unresolved Debate

The ECJ’s analysis and interpretation of Article 15(3) of the Open Skies Agreement, in conjunction with Articles 2 and 3(4) of the same agreement, establishing that the EU ETS is not prohibited under the Open Skies Agreement, however admirable, leaves important questions unresolved. Specifically, the judgment could have benefitted from an interpretation of the phrase “fair and equal opportunity” as provided for in Article 2 of the Open Skies Agreement. The view that non-discriminatory application of the EU ETS ensures “fair and equal opportunity for the airlines of both Parties to compete in providing the international air transportation governed by [the Open Skies] Agreement” is not likely to be shared outside of the EU.

3. Aviation and the EU Emissions Trading System

ICAO was tasked in the Kyoto Protocol to lead global action to reduce greenhouse gas emissions from the aviation industry. While it asserts its leading role in tackling the environmental impact of air transport, ICAO has faced various challenges in the adoption of effective measures. It is in this context that the European Union has unilaterally adopted legislation to include the aviation industry in the EU ETS. The EU’s aviation emissions policy can therefore be situated in the broader debate on the legality of unilateral environmental measures with extraterritorial effect.

3.1 ICAO mandate under the Kyoto Protocol

In the negotiations leading to the Kyoto Protocol, states party to the United Nations Framework Convention on Climate Change (the “UNFCCC”) discussed how to include emissions from the international aviation sector in a global climate change agreement. These discussions focused on the issue of how to allocate international aviation greenhouse gas emissions amongst countries. Various options were discussed including a division of emissions between the countries of origin and destination, assigning allowances based on the nations who purchased or sold jet fuel, or the nationality of aircraft. No agreement on this issue was reached, and although States party to the Kyoto Protocol must report emissions from the international aviation sector in their national greenhouse gas inventories, these emissions are not included in the calculation of developed countries’ emission reduction commitments.

As a compromise Article 2.2 was inserted into the Kyoto Protocol, with the aim of promoting continued dialogue:

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44 Open Skies Agreement, supra note 18, art. 15(3) as amended by Protocol amending Open Skies Agreement, supra note 18, art. 3.
45 Open Skies Agreement, ibid., arts. 2, 3(4).
46 See Decision, supra note 2, paras. 148 – 156.
47 Open Skies Agreement, supra note 18, art. 2.
51 Kati Kulovesi, “Make your own special song, even if nobody else sings along: International aviation emissions and the EU emissions trading scheme” (2011) 2 Climate Policy 4, 3.
“The Parties included in Annex I shall pursue limitation or reduction of emissions of greenhouse gases not controlled by the Montreal Protocol from aviation and marine bunker fuels, working through the International Civil Aviation Organization and the International Maritime Organization, respectively.”

ICAO was established by the Chicago Convention with the mandate to promote the safe and orderly growth of civil aviation and to foster the planning and development of international air transport. The Chicago Convention does not address greenhouse gas emissions from the aviation sector. However, ICAO has developed binding international standards and regulations on environmental issues. At the 37th ICAO Assembly held in Montreal in November of 2010, ICAO maintained that it holds a leading role in tackling the environmental impact of aviation and acknowledged its responsibility in this area.

3.2 ICAO Progress on Greenhouse Gas Emissions

Since it was delegated responsibility in 1997 to regulate and limit international aviation emissions, various commentators have characterised the progress of ICAO as slow. In 2004, ICAO adopted three major environmental goals, one of which was “to limit or reduce the impact of aviation greenhouse gas emissions on the global climate”. At the 37th ICAO Assembly, Member States committed to a global annual average fuel efficiency improvement of two per cent through to 2020 and an aspirational goal of a global fuel efficiency improvement rate of two per cent per annum from 2021 to 2050. In addition, Member States adopted a medium-term aspirational goal of maintaining global net carbon dioxide (CO2) emissions from international aviation at 2020 levels.

ICAO has invited Member States to submit voluntary national action plans outlining their CO2 reduction policies and activities by June 2012. There is in principle agreement between ICAO Member States that the most desirable policy design is a market-based mechanism, including emissions trading schemes. Consequently, ICAO has developed a framework of guiding principles for the development and design of market-based mechanisms by Member States. It should be noted that one of the guiding principles is that participation in any domestic market-based mechanism should be on the basis of the mutual consent of the countries involved.

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53 Convention on International Civil Aviation, opened for signature 1 December 1944 (entered into force 5 March 1947), art 43. (Chicago Convention).
54 Ibid., art 44.
59 Resolution A37-19, supra note 9, para. 4
60 Ibid., para 6.
61 Ibid., para 9-10.
63 Resolution A37-19, supra note 9, para. 14 and Annex.
64 Ibid.
Forty-two European countries made a reservation to this guideline, due to the potential conflict with the inclusion of aviation in the EU ETS.\(^{66}\)

These aspirational targets and guiding frameworks are the result of more than a decade of work by ICAO on the regulation of aviation greenhouse gas emissions. ICAO states that its action so far is “an important first step to address greenhouse gas emissions from international aviation”.\(^{66}\) It would therefore be prudent to investigate which factors have hindered ICAO’s adoption of an international agreement regulating aviation emissions.

### 3.3 Obstacles to the Progress of ICAO

After the failure of the UNFCCC to include international aviation emissions in the Kyoto Protocol, there has been a general political reluctance to negotiate an agreement under ICAO.\(^{67}\) Commentators have questioned whether ICAO’s mandate to promote the growth of the aviation industry is compatible with the mitigation of emissions from international aviation.\(^{68}\) The emphasis on growth is demonstrated in a statement in Resolution A36/22 which urges Member States to “refrain from environmental measures that would adversely affect the orderly and sustainable development of international civil aviation”.\(^{69}\) Indeed, ICAO has been accused of serving “as much, if not more, as a forum for championing causes to preclude the sector from mandatory measures aimed at reducing [greenhouse gas] emissions as it has for developing such measures”.\(^{70}\)

A second major obstacle has been the conflict between the principle of common but differentiated responsibilities contained in the UNFCCC and the Kyoto Protocol and the principle of non-discrimination contained in the Chicago Convention.\(^{71}\) The principle of common but differentiated responsibilities “recognises that developed countries are principally historically responsible for the current high levels of greenhouse gas emissions in the atmosphere.”\(^{72}\) Subsequently, the burden for reducing greenhouse gas emissions is to be placed primarily on developed nations. The principle of non-discrimination states that all regulations, standards and rules are to apply equally to aircraft of all countries, without distinction as to nationality.\(^{73}\) Developing countries therefore seek some form of lesser obligation, following the principle of common but differentiated responsibility, while developed countries insist on equality. Member States have reached an impasse in negotiations conducted through ICAO, resulting in limited global action to date.\(^{74}\) The slow environmental progress of ICAO to address the international aviation greenhouse gas emissions has compelled the EU to take unilateral action on this issue.

\(^{65}\) McCollum, Gould& Greene, supra note 3, 27.


\(^{68}\) Oberthür, supra note 2, 195.


\(^{70}\) Claybourne Fox Clarke and ThiagoChagas, “Aviation and Climate Change Regulation” in David Freestone and Charlotte Streek (eds), Legal Aspects of Carbon Trading (OUP, 2009), 609.


\(^{73}\) Chicago Convention, supra note 6, art. 11.

\(^{74}\) Chiavari, Withana and Pallemaerts, supra note 22, 29-30.
4. Unilateral approaches in International Law

There is an on-going debate regarding the effectiveness and desirability of countries unilaterally adopting measures aimed at the regulation of the environment but which apply extraterritorially, or outside the territorial jurisdiction of the legislating country. Domestic or regional measures may indirectly impact third party countries by requiring certain action to be taken, if they wish to continue trading with the legislating country.

Two examples of such unilateral measures illustrate the challenges involved. First, countries implementing an emissions trading scheme or carbon tax may include measures to protect the competitiveness of their energy-intensive industries, such as border tax adjustments. The adjustment of energy taxes at the border imposes a tax on imports equivalent to the cost of carbon imposed on a similar domestic product and based on the fact that the product has been produced abroad without a carbon price. Border tax adjustments aim to protect the competition of domestic industries that will face higher production costs than their international competitors, due to the carbon price. However, they simultaneously impose an obligation on third country importers to pay the equivalent of a carbon price, if that third country has not adopted comparative climate change abatement measures. This type of measure is extraterritorial to the extent that it impacts industries of the importing country.

A second famous example of a unilateral measure with extraterritorial effect is the “Shrimp-Turtle” case heard by the World Trade Organisation (the “WTO”) Appellate Body. In this case, the United States (the “US”) introduced regulations to limit the number of sea turtles being trapped by shrimp trawling practices. These regulations included an obligation to limit the importation of shrimp from countries that had not taken comparative measures to protect sea turtles. The ruling of the Appellate Body has been interpreted as justifying environmental policies with extraterritorial effect provided certain safeguards are met, including the consideration of comparative regulations in third countries and the conducting of prior negotiations with the aim of concluding an international agreement. The Appellate Body noted that good-faith efforts to find a multilateral solution were sufficient, and consequently it has been argued that “a multilateral approach, although strongly preferred over a unilateral approach, cannot be required if no agreement is possible after good faith negotiations.”

Nevertheless, the legality of unilateral measures with extraterritorial effect continues to be hotly debated. The principle of sovereignty, which asserts that States have exclusive sovereignty over their own territory, may be violated by such measures. Unilateral measures that also impact a third country’s environmental affairs arguably breach this principle. However, Howse, a leading WTO scholar, has argued that trade measures such as border tax adjustments are territorial rather than extraterritorial measures, as they apply at the border, which is within the territorial jurisdiction of the regulating state.

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57 Kulovesi, supra note 4, 12-13.
58 Frank Biernann and Rainer Brohm, “Implementing the Kyoto Protocol without the USA: the strategic role of energy tax adjustments at the border” (2005) 4 Climate Policy 289, 291.
59 Ibid.
62 Ibid.
63 Kulovesi, supra note 4, at 15.
64 LudvineTamiotti, ‘The legal interface between carbon border measures and trade rules’ (2011) 11 Climate Policy 1202, 1207.
66 Kulovesi, supra note 4, at 13.
The adoption by States of measures aimed at protecting the environment, however admirable, raises concerns that the extensive use of unilateral measures by an increasing number of countries will damage the legitimacy of international action on global commons’ problems. Moreover, if many countries were to employ unilateral measures, this could result in an undesirable fragmentation of environmental protection.

4.1 Unilateral Measures in Aviation: Aircraft noise as a case study

Unilateral measures have previously been adopted in the field of aviation. In 1999, a dispute arose between the EU and the US over international noise control standards when the EU unilaterally adopted the so-called “Hushkit Regulation”. Aircraft noise is a particularly sensitive issue for the EU, as EU airports are often in areas of dense population, and public pressure on politicians to address this environmental problem is strong. Following slow progress by ICAO on the issue of aircraft noise control measures, the EU adopted more stringent noise control measures than those endorsed by ICAO. Nevertheless, the EU maintained its support for global measures through ICAO, if it resulted in appropriate environmental protection.

For purposes of certification and registration, aircraft are divided into four chapters. To be certified as a Chapter 3 or 4 aircraft, an aircraft must have an engine that produces minimal noise. ICAO binding standards to control aircraft noise allowed Chapter 2 aircraft engines to be technically modified with hushkits, which acted as a muffler to reduce noise. These aircraft could then be recertified to meet the standards of Chapter 3 aircraft in relation to noise. The EU’s Hushkit Regulation proposed to ban such modified aircraft from EU airspace, only allowing aircraft that had been originally certified as complying with Chapter 3 noise standards.

This case study has multiple linkages to the analysis of the Directive. The EU has adopted strict greenhouse gas emission reduction targets – to reduce emissions by 20 per cent below 1990 levels.

85 Ibid., at 24.
86 Ibid.
88 Fox Clarke and Chagas, supra note 23, 619-620.
90 Ibid., 100-101.
92 Rijsdijk, supra note 42, 101.
93 Dempsey, supra note 40, 1141.
95 Chiavari, Withana and Pallemaerts, supra note 22, 23.
by 2020. The EU must reduce emissions from the aviation sector in order to achieve these reduction targets. Therefore, the political will and legal impetus exist for the EU to reduce its aviation emissions. Whether the EU’s unilateral action will provide the impetus for ICAO to adopt CO\textsubscript{2} emissions standards or propose a global emissions trading scheme is as yet unknown.

5. The EU ETS and International Law

In 2003 the European Union (EU) established a scheme for greenhouse gas emission allowance trading within the Community (in the following EU ETS) through Directive 2003/87/EC. The EU ETS aims at reducing anthropogenic emissions of certain greenhouse gases in a cost-effective and economically efficient manner. It is administered by the Commissioner on Climate Action as well as national competent authorities in EU member states.

Starting in 2005 with the first emission trading period (2005-2007), the total emissions of EU industry sectors covered by the scheme were capped and at the end of each compliance cycle companies needed to surrender allowances matching their emissions in order to comply with the EU regulations and avoid sanctions. The big share of emission allowances was allocated directly and free of charge, a smaller percentage was auctioned and allowances could also be acquired through trading on the carbon market. Starting with the second emission trading period (2008-2012), companies could also purchase certified allowances from clean energy projects under the Kyoto Protocol Mechanisms.

In 2010 the industrial installations in the scheme accounted for almost half of the EU’s CO\textsubscript{2} emissions and 40% of its total greenhouse gas emissions. Critics of the scheme highlight the fact that triggered by the EU’s financial and economic crisis carbon prices have been especially low since 2011, keeping the scheme from actually incentivising the reduction of greenhouse gas emissions. This issue of oversupply of credits is very likely to be addressed in the third phase of the scheme, which starts in 2013.

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\textsuperscript{96}European Commission, ‘What is the EU doing on climate change’ online: \url{http://ec.europa.eu/clima/policies/brief/eu/index_en.htm}.

\textsuperscript{97}Chiavari, Withana and Pallemaerts, supra note 22, 31.


\textsuperscript{99}Directive 2003/87/EC, Article 1 (Subject matter), para (30), Article 3 (Definitions) (c) and Annex 1, 2.

\textsuperscript{100}According to Directive 2003/87/EC, Article 3 (Definitions) (a) ‘allowance’ means an allowance to emit one tonne of carbon dioxide equivalent during a specified period.

\textsuperscript{101}Directive 2003/87/EC, Article 11 (Allocation and issue of allowances) and Article 30 para (3) (Review and further development).

\textsuperscript{102}European Commission, Climate Action, EU Emission Trading System, 15 November 2010, online: EC \url{http://ec.europa.eu/clima/policies/ets/index_en.htm}; European Commission, Climate Action, Reducing emissions from the aviation sector, 10 January 2012, online: EC \url{http://ec.europa.eu/clima/policies/transport/aviation/index_en.htm}.

With the entry into force of the Directive, greenhouse gas emissions from aviation activities have been regulated by the EU ETS since January 1, 2012. The Directive is therefore the legal basis for the inclusion of emissions from all domestic or international flights arriving at and departing from Community aerodromes in the scheme.\(^\text{104}\)

In 2012, the total quantity of allowances allocated to aircraft operators is equivalent to 97\% of the ‘historical aviation emissions’ and from 2013 onwards 95\%.\(^\text{105}\) Thereby, 15\% of the total quantity of allowances is auctioned, from 2013 on 3\% will be set aside in a special reserve for aircraft operators expanding their business and the remaining allowances – and therefore the biggest share – are allocated free of charge in each trading period and after aircraft operators applied for them at the competent authorities of their administering member state.\(^\text{106}\)

To meet their obligations under the Directive aircraft operators may also buy emission credits from clean energy projects carried out in third countries under the Kyoto Protocol mechanisms\(^\text{107}\) or they can buy allowances on the carbon market – including allowances from other sectors. If aircraft operators do not comply with the requirements of the Directive they will face sanctions including an operating ban at last resort.\(^\text{108}\)

The Directive also holds a de-minimis regulation and excludes airlines operating limited services within the scope of the Community scheme.\(^\text{109}\) In addition aviation activities per definition exclude amongst others small aircrafts as well as state, military, rescue, emergency and training flights.\(^\text{110}\)

To avoid double regulation and also as a possible step towards a global agreement on greenhouse gas emission reduction in the aviation sector the Directive highlights the option of linking the scheme with emission trading schemes from other countries or regions through bilateral arrangements. More generally, the Directive calls on the Commission to “consider the options available in order to provide for optimal interaction between the Community scheme and other country’s measures”, if these measures “have an environmental effect at least equivalent to that of the Directive, to reduce the climate impact of flights to (and from) the Community”.\(^\text{111}\)

Allowances for aviation activity in 2012 will need to be surrendered by 30 April 2013.\(^\text{112}\)

The airline industry has also expressed concerns that the unilateral approach of EU Member States will impede other States from introducing their own measures to reduce aviation emissions.\(^\text{113}\)
emissions, because of difficulties in avoiding double regulation in international aviation. The fact that the EU ETS includes provisions enabling the linkage to other schemes does not lead to a different assessment according to the industry, as the EU would always be in a position to unilaterally amend its legislation.113

5.1 The View of ICAO

In a working paper, adopted on November 2, 2011, the ICAO Council is invited to urge the EU and its Member States to refrain from including flights by non-EU carriers to and from airports located in the territory of EU Member States in the ETS.114 The paper is backed by 26 of the 36 Member States on the ICAO Council – including China, Japan, Russia and the United States. Besides the eight EU Member States that opposed the adoption Australia and Canada were absent at the vote. Although the paper is not legally binding for the Council or any ICAO member it reflects the strong opposition to the inclusion of aviation in the ETS by the majority of ICAO member countries.115

The paper claims that the unilateral measure of including civil aviation in the EU ETS contravenes the articles of the Chicago Convention and its Preamble and that it violates the principle of state sovereignty laid down in Article 1 of the Chicago Convention as well as relevant provisions of the UNFCCC. Moreover, the paper claims that implementation of the EU ETS without ICAO’s concurrence would undermine ICAO’s leading role in matters related to aviation and environment and in particular pre-empt and negate ICAO Assembly Resolution A37-19,116 which was also supported by EU Member States. The resolution calls on the Council to develop a framework for market-based measures and to present it before the 38th Assembly.117 However, the Resolution includes a set of guiding principles for the design and implementation of market-based measures and Member States are urged to respect these when designing new and implementing existing market-based measures for international aviation. Although Member States are still urged to engage in constructive bilateral and/or multilateral consultations and negotiations with other states to reach agreements the Resolution thus refrains from the restrictive Assembly Resolution A36-22, which required ‘mutual agreements’ for emission trading schemes affecting international aviation of any size. Nevertheless, Resolution A37-19 also reaffirms the declaration that ICAO is the most appropriate forum for future discussions on solutions to international aviation emissions including marked-based mechanisms.118

113 Ibid., para (28).
114 International Civil Aviation Organization (ICAO), working paper, Council — 194th Session, 17 October 2011, C-WP/13790, Subject No. 50: Questions related to the environment: Inclusion of International Civil Aviation in the European Union Emissions Trading Scheme (EU ETS) and its impact (presented by Argentina, Brazil, Burkina Faso, Cameroon, China, Colombia, Cuba, Egypt, Guatemala, India, Japan, Japan, Malaysia, Mexico, Morocco, Nigeria, Paraguay, Peru, Republic of Korea, Russian Federation, Saudi Arabia, Singapore, South Africa, Swaziland, Uganda, the United Arab Emirates and the United States), online: Greenair <www.greenaironline.com/photos/ICAO_C.194.WP.113790.EN.pdf> [ICAO working paper].
117 ICAO working paper, supra note 28, paras (2.1)-(2.4), (4.2).
118 ICAO, Assembly Resolution A37-19, supra note 30; ICAO, Assembly Resolution A36-22, ‘Consolidated Statement of continuing ICAO policies and practices related to environmental protection’; September 2007, online: ICAO <legacy.icao.int/icao/en/assembly/a36/doc/A36_res_prov_en.pdf>; Michel Adam, “ICAO Assembly’s
5.2 The Commission’s View on EU ETS expansion to Aviation

In line with the provisions of the Directive, the European Commission (the “EC”) regards the inclusion of aviation within the EU ETS as an important step to fulfil its international commitments to reduce greenhouse gas emissions in the transport sector. Furthermore, and also in accordance with the provisions of the Directive, the EC regularly highlights that the EU ETS may serve as a model for the use of emissions trading worldwide. In that sense, the inclusion of aviation in the EU ETS does not stand in contradiction to the EU’s commitment of finding a global solution for reducing emissions from civil aviation (through ICAO), but can be seen as a first step towards a global mechanism.\(^{119}\)

Ms. Connie Hedegaard, the commissioner on climate action, thus called on the ICAO to concentrate on finding a viable global solution instead of condemning national or regional solutions like the EU ETS – especially since the EU is ‘delivering on its commitment to reduce emissions in line with ICAO-endorsed principles’.\(^{120}\) She also reaffirmed the EU’s wish to ‘engage constructively with third countries during the implementation of ETS legislation’.\(^{121}\) As an example of how the EC could respond to other country’s measures, that have an environmental effect at least equivalent to that of the Directive, the EC names the exclusion of flights arriving from that state from the EU ETS.\(^{122}\) And Jos Delbeke, Commission’s director-general for climate, recently pointed out that ETS aviation legislation could also be changed if there is an international agreement on reducing emissions.\(^{123}\)

The legality of the EU ETS and thus its compatibility with international law was subject of an EC presentation on ‘aviation in the EU ETS’ held at the ICAO Council in September 2011. The relevant part of the presentation focuses on why the EU ETS is not a tax as well as its consistency with the UNFCCC principle of ‘common but differentiated responsibilities’ (CBDR).\(^{124}\) Regarding CBDR the EC claims that the EU ETS does not apply to states, but to businesses active in the EU market, whereas the CBDR applies to states and the climate measures

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\(^{119}\) Compare Directive 2008/101/EC, para (9) and (17); EU Commission presentation on aviation in the EU ETS at the ICAO Council Briefing, 29 September 2011, slide 43, online: EC <[ec.europa.eu/clima/policies/transport/aviation/docs/presentation_icao_en.pdf]> [EC presentation].

\(^{120}\) Greenair, supra note 29.

\(^{121}\) Aviation into the EU ETS: Connie Hedegaard „glad to see that the EU Directive is fully compatible with international law”, European Commission, Climate Action, newroom, 6 October 2011, online: EC <[ec.europa.eu/clima/news/articles/news_2011100601_en.htm]> (accessed on December 13, 2011).

\(^{122}\) EU Commission presentation on aviation in the EU ETS at the ICAO Council Briefing, 29 September 2011, online: EC, <[ec.europa.eu/clima/policies/transport/aviation/docs/presentation_icao_en.pdf]> [EC presentation]. Compare also Directive 2008/101/EC, para (17). And according to Mrs. Hedegaard negotiations regarding possible exceptions from the EU ETS are already ongoing with Russia and China (EU ETS faces pushback, ICTSD, supra note 29; Greenair, supra note 29; European Commission, Climate Action, Reducing emissions from the aviation sector, 10 January 2012, online: EC <[http://ec.europa.eu/clima/policies/transport/aviation/index_en.htm]>.

\(^{123}\) Dave Keating, "EU 'flexible' on ETS if global deal is reached" European Voice (8 February 2012), online: European Voice <[http://www.europeanvoice.com/article/2012/february/eu-flexible-on-ets-if-global-deal-is-reached/73497.aspx]>.

\(^{124}\) EC presentation, supra note 36.
that they take. In addition the EC underlines, that discriminating between operators on the basis of nationality would be incompatible with the Chicago Convention.\textsuperscript{125}

To demonstrate that the EU ETS is neither a tax nor a charge the EC first highlights that emissions trading is clearly recognised by ICAO as a policy instrument distinct from taxes and charges.\textsuperscript{126} Then the EC highlights the following characteristics of the EU ETS:

- The key objective of the policy is to limit emissions, not to raise revenues;
- Most allowances are allocated for free, a small proportion is offered at auctions; and
- 100\% of revenues should be spent by EU Member States on climate change mitigation and adaptation.\textsuperscript{127}

6. Aviation Emissions: Challenging ICAO’s Exclusive Jurisdiction

Despite the primacy purportedly accorded to ICAO by the Kyoto Protocol, the international law of civil aviation provides regulatory space for a global approach to reducing aviation emissions. States have exclusive sovereignty over their territory and general authority over their nationals.\textsuperscript{128} The submission to the disciplines of the world trade system implicates the right of every State to regulate its economy, and the actors within that economy,\textsuperscript{129} by freely accepting restraints on its commercial sovereignty. While ICAO is endowed under Chicago Convention and UNFCCC, with certain powers of oversight regarding aviation emissions, it does not have exclusive stewardship; States remain free to work within or outside ICAO to develop a consensual treaty-based approach to carbon emissions reduction.

Despite Article 2(2) of the Kyoto Protocol and an ICAO resolution reaffirming ICAO’s legitimacy as the lead international body charged with developing a global response to aviation’s role in climate change,\textsuperscript{130} it is true that ICAO resolutions have been characterised as “soft law”.\textsuperscript{131} The resolutions do not specify whether ICAO’s members imagine a global treaty imposing MBMs such as emissions trading, or rather foresee a purely non-binding framework.\textsuperscript{132} Moreover, ICAO’s 2010 Resolution suggests that its Member States no longer see ICAO as the sole or exclusive agency for international aviation emissions control. The Resolution sets forth a series of “Guiding Principles” for the imposition of both bilateral and multilateral MBMs. The use of the term “Guiding Principles” suggests that Member States elected not to attribute exclusive jurisdiction over the regulation of global emissions from aviation to ICAO, notwithstanding Article 2(2) of the Kyoto Protocol. Presumably, so long as the Protocol’s Parties do not venture beyond ICAO’s mandates as listed in the Chicago Convention and expressed through Assembly Resolutions, there would be no conflict if two States, certain clusters of States, or even all of the ICAO member States were to negotiate an emissions reduction treaty outside ICAO.

\textsuperscript{125} Ibid., slide 40 and for a general discussion of the CBDR principle in the context of reducing the emissions of aviation view Adam, supra note 232, pg. 25-28.

\textsuperscript{126} Compare e.g. ICAO, Assembly resolution 37-19, supra note 27.

\textsuperscript{127} EC presentation, slide 37, supra note 36. Compare also Directive 2008/101/EC, para (21), (39) Article 3d (Method of allocation of allowances for aviation through auctioning).

\textsuperscript{128} RESTATEMENT (THIRD) OF FOREIGN RELATIONS LAW OF THE UNITED STATES §206(a)

\textsuperscript{129} M. Sornarajah, “The International Law on Foreign Investment”, 1999 (3\textsuperscript{rd} ed. 2010)

\textsuperscript{130} ICAO, Consolidated Statement of Continuing ICAO Policies and Practices Related to Environmental Protection, Assembly Resolution A37/19, (2007)


\textsuperscript{132} Assembly Resolution A37/19, (2007), paras.13
7. China’s Reaction to the Directive

Although a draft of the Directive had been released in January 2009, China took an active stance two years later. Its reactions have included protest, consultation and joint-protest with like-minded States, proposed litigation and retaliatory measures.

China’s position is that the regulation of greenhouse gas emissions from aviation should be accomplished under a multilateral arrangement. As a rising power, China expects to participate in the rule-making process in all international fields. The Directive, from a China perspective, has relegated China to a purely “rule-taking” position.

China welcomed the new proposal released by the ICAO recently on four potential mechanisms\(^\text{133}\) which, if accepted by parties, may respond to the EU decision on aviation. After parties reach an agreement on how they will mitigate greenhouse gases by adopting one of the mechanisms, China hopes that the EU will suspend its decision to include foreign airlines in the EU ETS.

7.1 Retaliatory Measures and Future Aircraft Orders

On 7 July 2011, the Civil Aviation Administration of China and Russia’s Department of Transportat published a Joint-Declaration on Inclusion Aviation Activities to the EU ETS, which condemned the EU’s decision to include international aviation activities in its ETS, and raised the possibility of pursuing retaliatory measures.\(^\text{134}\) On 1 August 2011, 21 airlines assembled in Beijing and adopted the Beijing Common Declaration, a joint protest against the Directive, which they claimed violated international law.

Retaliatory measures considered by China include import restrictions on products originating in the EU as well as a tax on jet fuel, coupled with a refund of taxes collected from Chinese airlines.\(^\text{135}\) Additionally, possible orders by Chinese airlines of European-built aircraft (Airbus A380 and A330 models) were put into question. The trading history of aircraft between China and both the United States and the EU demonstrates that the orders were never purely commercial transactions.\(^\text{136}\)

7.2 Justifications of China’s Position

China opposes the inclusion by the EU of emissions from aviation activities originating outside of the EU in the EU ETS as contemplated by the Directive, and has advanced the following reasons, on various occasions, to justify its position:

\(^{133}\) Aviation Brief, ICAO Sees Difficult Path to Emission Plan, [http://www.aviationbrief.com/?p=6620](http://www.aviationbrief.com/?p=6620) (last visited 23 March 2012). There are no 'official' comments from Chinese government on the ICAO proposal. However, Haibo Chai, the Deputy Secretary of Chinese Civil Aviation Association made very positive comments. So do several Chinese experts. See ICAO’s Proposal to Replace EU’s Carbon Tax Might Get Support from US and China, *Jingji Cankao Bao (经济参考报)*, 19 March 2012.

\(^{134}\) Article 5, Совместное заявление Министерства транспорта Российской Федерации и Управления гражданской авиации Китайской Народной Республики в вопросе о включении авиации в Европейскую систему торговли квотами на выбросы парниковых газов.


\(^{136}\) The Secrets in Ordering Boeing and Airbus, *Caijing(财经)*, 21 February 2005.
- EU lacks authority to regulate global greenhouse gas emissions resulting from aviation activities.

- The EU, in adopting the Directive, disregards the Principle of Common but Differentiated Responsibility in the UNFCCC and the Kyoto Protocol.

- Since UNFCCC was signed, China argues all the time that according to the principle of common but differentiated responsibilities, developing states have no responsibilities, or no mandatory responsibilities to mitigate their greenhouse gas emissions. In recent international climate negotiation, China showed more flexibility in accepting mandatory responsibilities; however, it refuses to assume responsibility in the same way as a developed state does. According to China’s own plan, the emission from airlines will be reduced 3% per ton kilometre in 2015 compared to that in 2010.137

- EU cannot exercise extraterritorial jurisdiction over non-EU airlines for their greenhouse gas emissions.

- The Directive violates Articles 1, 11, 12, 15 and 24 of the Chicago Convention. Although the European Court found that the EU is not bound by the Chicago Convention because it is not a party to it, EU Member States are bound by the Chicago Convention and their obligations under it contradict their obligation, under European Community law, to implement the Directive.

- The Directive violates bilateral agreements on Civil Air Transportation between China and 21 EU Member States.

- The Directive potentially challenges the Principle of Special and Differential Treatment of WTO GATS.

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137 Civil Aviation Administration of China, The 12th Five-year Plan of Development of Civil Aviation, section III.