

# PUTTING INTERNATIONAL AVIATION INTO THE EUROPEAN UNION EMISSIONS TRADING SCHEME: CAN EUROPE DO IT FLYING SOLO?

DANIEL B. REAGAN\*

**Abstract:** In December 2006, the European Commission announced a proposal for a directive that would bring international civil aviation within its Emissions Trading Scheme, the most ambitious international carbon dioxide emissions trading scheme to date, and the European Union's primary means of meeting its Kyoto Protocol obligations. While aviation and environmental stakeholders throughout the world have showed strong support for the proposal, representatives of aviation interests inside, and especially outside, the European Union have reacted with skepticism and concern. This Note discusses the international civil aviation regulatory framework and the mechanics of the proposed directive. It then explores the political, technical, and legal implications of the proposed legislation and concludes that the European Commission should not include international aviation in the European Union Emissions Trading Scheme, but rather should vigorously pursue multilateral international aviation emissions reductions through the International Civil Aviation Organization.

## INTRODUCTION

Aircraft release gaseous and particulate emissions at high altitudes directly into the atmosphere.<sup>1</sup> These emissions likely contribute to climate change through altering the atmospheric concentrations of greenhouse gases—including carbon dioxide (CO<sub>2</sub>), ozone (O<sub>3</sub>), and methane (CH<sub>4</sub>)—forming condensation trails, and increasing cirrus cloudiness.<sup>2</sup> Aircraft emissions account for approximately two percent

---

\* Solicitations Editor, BOSTON COLLEGE ENVIRONMENTAL AFFAIRS LAW REVIEW, 2007–08.

<sup>1</sup> Intergovernmental Panel on Climate Change [IPCC], *Aviation and the Global Atmosphere: Summary for Policy Makers*, at 3 (1999) [hereinafter IPCC Report, *Aviation and the Global Atmosphere*].

<sup>2</sup> *Id.* See generally Intergovernmental Panel on Climate Change [IPCC], *Climate Change 2007: The Physical Science Basis, Summary for Policy Makers* (2007), available at

of global CO<sub>2</sub> emissions.<sup>3</sup> These emissions are projected to increase as the international civil aviation industry expands.<sup>4</sup>

Global concern over the climate change effects of greenhouse gas emissions, particularly CO<sub>2</sub>, continues to increase.<sup>5</sup> Regulatory bodies are extending their reach to cover CO<sub>2</sub> emissions.<sup>6</sup> During the last two decades, concerned regulatory bodies have moved beyond traditional command-and-control regulation and have developed novel emissions regulation mechanisms, including market-based systems such as emissions trading.<sup>7</sup> The European Union (EU) has implemented its Emissions Trading Scheme (ETS)—the most ambitious CO<sub>2</sub> emissions trading scheme to date—as a primary means of meeting its Kyoto Protocol targeted CO<sub>2</sub> emissions reductions.<sup>8</sup> Phase I of the ETS began on January 1, 2005, and is limited to CO<sub>2</sub> emissions from industrial installations in the energy, metal production, mineral, and paper industries in EU member-states.<sup>9</sup> The EU is employing a phased implementation of the ETS, with successive iterations featuring tightened emissions targets and expanded coverage of new industries.<sup>10</sup>

On December 20, 2006, the European Commission (EC), the executive body of the EU, announced a proposal for a directive (Proposed Directive) that would bring civil aviation within the ETS.<sup>11</sup> The Proposed Directive would extend the ETS to cover flights within the EU in 2011 and all flights arriving in or departing from the EU in 2012.<sup>12</sup>

---

<http://www.ipcc.ch/ipccreports/ar4-wg1.htm> (providing an updated report on the effects of human activity on climate change).

<sup>3</sup> IPCC Report, *Aviation and the Global Atmosphere*, *supra* note 1, at 6.

<sup>4</sup> *Id.*

<sup>5</sup> CLIMATE CHANGE AND CARBON MARKETS, at xxx (Farhana Yamin ed., 2005).

<sup>6</sup> *See id.*; Laurence Neville, *Power Plays*, GLOBAL FIN., Feb. 1, 2007, at 42 (noting the increasing likelihood of carbon regulation in the U.S. energy industry).

<sup>7</sup> Jurgen Lefevere, *The EU Greenhouse Gas Emission Allowance Trading Scheme*, in CLIMATE CHANGE AND CARBON MARKETS, *supra* note 5, at 81–82.

<sup>8</sup> CONG. RES. SERVICE, CLIMATE CHANGE: THE EUROPEAN UNION'S EMISSIONS TRADING SYSTEM (EU-ETS) 1 (2006), available at [http://digital.library.unt.edu/govdocs/crs//data/2006/upl-meta-crs-9496/RL33581\\_2006jul31.pdf](http://digital.library.unt.edu/govdocs/crs//data/2006/upl-meta-crs-9496/RL33581_2006jul31.pdf) [hereinafter CRS ETS REPORT].

<sup>9</sup> EUROPEAN COMM'N, EU ACTION AGAINST CLIMATE CHANGE, EU EMISSIONS TRADING—AN OPEN SCHEME PROMOTING GLOBAL INNOVATION TO COMBAT CLIMATE CHANGE 7 (2004), available at [http://ec.europa.eu/environment/climat/pdf/emission\\_trading3\\_en.pdf](http://ec.europa.eu/environment/climat/pdf/emission_trading3_en.pdf) [hereinafter EC ETS BROCHURE].

<sup>10</sup> *Id.*

<sup>11</sup> Commission Proposal for a Directive of the European Parliament and of the Council Amending Directive 2003/87/EC so as to Include Aviation Activities in the Scheme for Greenhouse Gas Emission Allowance Trading Within the Community, at 2, COM (2006) 818 final (Dec. 20, 2006), available at [http://eur-lex.europa.eu/LexUriServ/site/en/com/2006/com2006\\_0818en01.pdf](http://eur-lex.europa.eu/LexUriServ/site/en/com/2006/com2006_0818en01.pdf) [hereinafter *Proposed Directive*].

<sup>12</sup> *Id.* at 6.

While aviation only accounts for a small portion of EU greenhouse gas emissions, the EC posits that failing to include aviation in the ETS would offset greater than twenty-five percent of its Kyoto CO<sub>2</sub> emissions reductions.<sup>13</sup>

While aviation and environmental policy stakeholders throughout the world have showed strong support for the Proposed Directive, representatives of aviation interests inside and outside the EU have reacted with skepticism and concern.<sup>14</sup> Non-EU aviation interests critical of the Proposed Directive have focused their attention on the Directive's extension of the ETS to flights originating outside of the EU or departing from an EU airport with a destination outside of the EU.<sup>15</sup> These representatives have raised political, technical, and legal critiques of the Proposed Directive's extension of the ETS to international aviation and have suggested that these concerns might ripen into legal action to block the implementation of the Directive.<sup>16</sup> They argue that extending the ETS to international aviation is politically and technically suspect and in violation of the existing regulatory framework for international civil aviation, which is comprised of the International Convention on Civil Aviation (Chicago Convention or Convention), bilateral air service agreements (ASAs) between states, and international law.<sup>17</sup>

Part I of this Note provides an overview of international civil aviation law. Part II describes the mechanics of the Proposed Directive and the EU rationale for including aviation within the ETS. Part III discusses the political, technical, and legal implications of the Proposed Directive's extension of the ETS to international aviation. In light of the implications described in Part III, Part IV concludes that the EC

---

<sup>13</sup> *Communication from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions: Reducing the Climate Change Impact of Aviation*, at 2, COM (2005) 459 final (Sept. 27, 2005), available at [http://eur-lex.europa.eu/LexUriServ/site/en/com/2005/com2005\\_0459en01.pdf](http://eur-lex.europa.eu/LexUriServ/site/en/com/2005/com2005_0459en01.pdf) [hereinafter *EC Communication on Reducing the Climate Change Impact of Aviation*].

<sup>14</sup> See Mark Pilling & Jackie Thompson, *Carbonstorm*, AIRLINE BUSINESS, Jan. 22, 2007, available at 2007 WLNR 2438040 (detailing the international response to the Proposed Directive, including the views of aviation representatives in the EU, United States, Asia, the Middle East, Africa, and Latin America).

<sup>15</sup> See Press Release, United States Mission to the European Union, U.S.'s Byerly Reaffirms Commitment to Finalizing Transatlantic Air Services Accord (Jan. 11, 2007), [http://useu.usmission.gov/Dossiers/Open\\_Skies/Jan1109\\_Byerly\\_Roundtable.asp](http://useu.usmission.gov/Dossiers/Open_Skies/Jan1109_Byerly_Roundtable.asp) [hereinafter U.S.-EU Mission Open Skies Press Release] ("The EU can do what it wants with its own carriers. That we don't challenge. We, along with many other countries around the world simply object to the mandatory and unilateral inclusion of all carriers in the EU scheme." (quoting John Byerly, U.S. Deputy Assistant Secretary of State for Transportation Affairs)).

<sup>16</sup> See discussion *infra* Part III.

<sup>17</sup> See discussion *infra* Part III.

should not include international aviation in the ETS but rather should vigorously pursue multilateral international aviation emissions reductions through the International Civil Aviation Organization (ICAO).

## I. INTERNATIONAL CIVIL AVIATION LAW

### A. *The Convention on International Civil Aviation*

The Convention on International Civil Aviation is the legal framework for modern international civil aviation.<sup>18</sup> The Convention was a product of the International Civil Aviation Conference, held in Chicago from November 1 to December 7, 1944.<sup>19</sup> At the invitation of the U.S. government, representatives from fifty-two participating countries convened in Chicago to establish a legal structure for post-World War II international civil aviation.<sup>20</sup> Since the Convention came into effect on April 4, 1947, more than 180 states, representing broad geographic and economic diversity, have become signatories.<sup>21</sup> The stated purpose of the Convention is to ensure that international civil aviation develops in a safe and orderly manner based on the principles of equality of opportunity, as well as sound and economical operation of air transport services.<sup>22</sup> The rights, privileges, and restrictions of the signatory states are detailed in the ninety-six articles of the Convention.<sup>23</sup> Technical international standards and recommended practices are described in the eighteen annexes to the Convention.<sup>24</sup>

### B. *The ICAO*

The Chicago Convention ICAO, a specialized agency of the United Nations, to enable the objectives of the convention and regulate international civil aviation.<sup>25</sup> The primary objectives of the ICAO include:

---

<sup>18</sup> R.I.R. ABEYRATNE, *LEGAL AND REGULATORY ISSUES IN INTERNATIONAL AVIATION* 9 (1996).

<sup>19</sup> THOMAS BURGENTHAL, *LAW-MAKING IN THE INTERNATIONAL CIVIL AVIATION ORGANIZATION* 4 (Richard B. Lillich ed., 1969).

<sup>20</sup> *Id.*

<sup>21</sup> *Id.* at 3–4; Int'l Civil Aviation Org., Contracting States, [http://www.icao.int/cgi/goto\\_m.pl?cgi/statesDB4.pl?en](http://www.icao.int/cgi/goto_m.pl?cgi/statesDB4.pl?en) (last visited Mar. 27, 2008).

<sup>22</sup> Convention on International Civil Aviation pmbl., Apr. 4, 1947, T.I.A.S. No. 1591, 15 U.N.T.S. 295 [hereinafter *Chicago Convention*].

<sup>23</sup> BURGENTHAL, *supra* note 19, at 4.

<sup>24</sup> Int'l Civil Aviation Org. [ICAO], *The Convention on International Civil Aviation: Annexes 1 to 18*, available at [http://www.icao.int/icaonet/anx/info/annexes\\_booklet\\_en.pdf](http://www.icao.int/icaonet/anx/info/annexes_booklet_en.pdf) [hereinafter *Booklet on the Annexes to the Chicago Convention*].

<sup>25</sup> BURGENTHAL, *supra* note 19, at 4–5.

insuring the safe development of aviation throughout the world; meeting the aviation needs of the world population; preventing economic waste due to unreasonable competition; and avoiding discrimination among member-states.<sup>26</sup> The ICAO consists of an Assembly, a Council, and other subsidiary bodies.<sup>27</sup> Each member-state has one vote in the Assembly, which is the sovereign body of the ICAO.<sup>28</sup> The Assembly meets at least once every three years to review the work of the organization, elect the Council, delegate matters to the Council or a subsidiary body, decide on agreements with other international actors, amend the Convention, and address any issue not specifically assigned to the Council.<sup>29</sup> Measures put to a vote in the Assembly must pass by a simple majority.<sup>30</sup>

The governing body, the Council, is composed of thirty-six representatives elected for three-year terms.<sup>31</sup> Council membership is controlled so that adequate representation is given to states of primary importance in international civil aviation, states that otherwise would not be included who provide a large contribution to aviation facilities, and states not otherwise included whose inclusion ensures representation of each major geographic region of the world.<sup>32</sup> The Convention vests in the Council legislative authority to draft and adopt international standards and recommended practices and to incorporate them in annexes to the Convention.<sup>33</sup>

### C. ICAO Rulemaking and Guidance

ICAO guidance reaches nearly all matters relating to international civil aviation.<sup>34</sup> Uniformity in aviation practices among member-states is an essential and consistent theme found throughout the Convention.<sup>35</sup> The ICAO favors stability and consensus in rulemaking to ease the

---

<sup>26</sup> Chicago Convention, *supra* note 22, art. 44.

<sup>27</sup> BUERGENTHAL, *supra* note 19, at 6.

<sup>28</sup> *Id.*

<sup>29</sup> *Id.*; Heather L. Miller, *Civil Aircraft Emissions and International Treaty Law*, 63 J. AIR L. & COM. 697, 710 (1998).

<sup>30</sup> BUERGENTHAL, *supra* note 19, at 6.

<sup>31</sup> Int'l Civil Aviation Org., Memorandum on ICAO, <http://www.icao.int/icao/en/pub/memo.pdf> [hereinafter Memorandum on the ICAO].

<sup>32</sup> *Id.*

<sup>33</sup> *Id.*

<sup>34</sup> See ABEYRATNE, *supra* note 18, at 280.

<sup>35</sup> Chicago Convention, *supra* note 22, art. 37 (committing parties to work toward uniformity to "the highest degree practicable" in regulations, standards, and procedures affecting aviation).

harmonization of national regulations with international standards and practices and to increase the likelihood of such harmonization.<sup>36</sup>

### 1. Technical Matters

One of the Council's primary functions is to draft and adopt international standards and recommended practices to provide guidance on technical matters related to international aviation.<sup>37</sup> The ICAO defines standards as any specification that's uniform application is recognized as necessary for the safety or regularity of international air transport and to which member-states will conform in accordance with the Convention.<sup>38</sup> Recommended practices are defined as any specification that's uniform application is recognized as desirable for the safety or regularity of international air transport and to which member-states will endeavor to conform in accordance with the Convention.<sup>39</sup>

After a two-thirds majority vote of the Council, standards and recommended practices become binding on all member-states who do not notify the Council of their objection within sixty days.<sup>40</sup> The Convention provides that when a member-state finds it cannot reasonably comply with a standard or practice, it notify the ICAO, which in turn will notify the remainder of the member-states.<sup>41</sup> This enactment procedure is flexible by design and accounts for the divergent levels of economic development and power among the member-states.<sup>42</sup>

### 2. Economic Matters

The ICAO has elaborated on the few Chicago Convention provisions regarding economic rights and offered guidance to prevent the imposition of economic barriers to international aviation.<sup>43</sup> Article 15 of the Chicago Convention provides that aviation facilities and services

---

<sup>36</sup> ABEYRATNE, *supra* note 18, at 15–17.

<sup>37</sup> Memorandum on the ICAO, *supra* note 31; see *Booklet on the Annexes to the Chicago Convention*, *supra* note 24.

<sup>38</sup> ABEYRATNE, *supra* note 18, at 16.

<sup>39</sup> *Id.*

<sup>40</sup> Miller, *supra* note 29, at 707.

<sup>41</sup> Chicago Convention, *supra* note 22, art. 38.

<sup>42</sup> Miller, *supra* note 29, at 728–29.

<sup>43</sup> See Int'l Civil Aviation Org. [ICAO], *ICAO's Policies on Charges for Airports and Air Navigation Services*, at 3, ICAO Doc. 9082/7 (7th ed. 2004), available at [http://www.icao.int/icaonet/dcs/9082/9082\\_7ed\\_en.pdf](http://www.icao.int/icaonet/dcs/9082/9082_7ed_en.pdf) [hereinafter *ICAO Policies on Charges*]; Int'l Civil Aviation Org. [ICAO], *ICAO's Policies on Taxation in the Field of International Air Transport*, at 1, ICAO Doc. 8632-C/968 (2d ed. 1994), available at [http://www.icao.int/icaonet/dcs/8632/8632\\_2ed\\_en.pdf](http://www.icao.int/icaonet/dcs/8632/8632_2ed_en.pdf) [hereinafter *ICAO Policies on Taxation*].

providers in signatory states may assess charges to recover their costs.<sup>44</sup> Article 15 further provides that no signatory state shall impose a charge based solely on right of transit, entry, or exit.<sup>45</sup> Subsequent ICAO guidance on Article 15 suggests that any charges assessed should be calculated to recover the cost of the facilities and services provided and should not exceed that amount.<sup>46</sup>

While the Chicago Convention itself does not deal extensively with taxes on international aviation, Article 24 exempts fuel and other supplies arriving on board from a “customs duty” and other charges.<sup>47</sup> Subsequent ICAO guidance on taxation suggests that this exemption applies to “import, export, excise, sales, consumption and internal duties and taxes of all kinds levied upon the fuel.”<sup>48</sup> Member-states typically negotiate taxation schemes in ASAs.<sup>49</sup> Concerned with the proliferation of bilateral taxation between member-states, the ICAO has reiterated its firm support of the principle of nontaxation of international aviation.<sup>50</sup>

### 3. Environmental Matters

The ICAO has demonstrated sustained responsiveness to environmental concerns.<sup>51</sup> Following the United Nations Conference on the Human Environment in 1972, the Assembly recognized in a resolution that international aircraft operation may have an adverse environmental impact.<sup>52</sup> In 1983, the ICAO established the Committee on Aviation Environmental Protection (CAEP) to make recommendations regarding environmental issues relating to civil aviation to the Assembly and Council.<sup>53</sup> The CAEP currently retains primary responsibility for most of the ICAO’s environmental efforts.<sup>54</sup>

Annex 16 to the Convention, entitled Environmental Protection, details international aviation standards and recommended practices related to environmental quality.<sup>55</sup> The first volume of the Annex ad-

---

<sup>44</sup> Chicago Convention, *supra* note 22, art. 15.

<sup>45</sup> *Id.*

<sup>46</sup> ICAO *Policies on Charges*, *supra* note 43, at 3, 12.

<sup>47</sup> See Chicago Convention, *supra* note 22, art. 24; Miller, *supra* note 29, at 712.

<sup>48</sup> ICAO *Policies on Taxation*, *supra* note 43, at 4.

<sup>49</sup> Miller, *supra* note 29, at 708.

<sup>50</sup> ICAO *Policies on Taxation*, *supra* note 43, at 1.

<sup>51</sup> Miller, *supra* note 29, at 712.

<sup>52</sup> ABEYRATNE, *supra* note 18, at 282.

<sup>53</sup> *Id.* at 287; Miller, *supra* note 29, at 714.

<sup>54</sup> Miller, *supra* note 29, at 714.

<sup>55</sup> *Booklet on the Annexes to the Chicago Convention*, *supra* note 24.

dresses aircraft noise and its impact on the human environment.<sup>56</sup> The adverse effects of aircraft noise are of particular concern to member-states in Europe, where airports tend to be located in areas with high population densities.<sup>57</sup> The second volume of the Annex addresses engine emissions and prescribes design specifications for the emission of smoke, hydrocarbons, carbon monoxide, and nitrogen oxides.<sup>58</sup> These technical standards acquire practical effect as engine manufacturers design and build engines to comply with the Annex 16 specifications.<sup>59</sup>

In 1998, the third Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC), at Kyoto, Japan, formalized the role of the ICAO in pursuing greenhouse gas emission reductions in international aviation.<sup>60</sup> The Kyoto Protocol makes signatory states responsible for emissions from domestic aviation, as Article 2.2 provides that signatory states shall work through the ICAO in achieving international aviation greenhouse gas emissions reductions.<sup>61</sup> At the ICAO's request, the United Nation's Intergovernmental Panel on Climate Change prepared and published a report in 1999 that focused on aviation's role in climate change.<sup>62</sup> The ICAO has also consulted the UNFCCC's Subsidiary Body on Scientific and Technological Advice on methods for collecting and reporting data on national greenhouse gas emissions.<sup>63</sup>

As environmental issues become increasingly entwined with economic, technical, and international policy, the ICAO's environmental efforts have expanded from setting technical standards on noise and emissions to considering market-based mechanisms to mitigate the ad-

---

<sup>56</sup> *Id.*

<sup>57</sup> Paul Stephen Dempsey, *Flights of Fancy and Fights of Fury: Arbitration and Adjudication of Commercial and Political Disputes in International Aviation*, 32 GA. J. INT'L & COMP. L. 231, 278 (2004).

<sup>58</sup> *Booklet on the Annexes to the Chicago Convention*, *supra* note 24.

<sup>59</sup> Miller, *supra* note 29, at 714.

<sup>60</sup> Kyoto Protocol to the United Nations Framework Convention on Climate Change art. 2.2, Dec. 10, 1997, 37 I.L.M. 22 [hereinafter Kyoto Protocol].

<sup>61</sup> *Id.* ("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.")

<sup>62</sup> Int'l Civil Aviation Org. [ICAO], *Consolidated Statement of Continuing ICAO Policies and Practices Related to Environmental Protection*, Assemb. Res. A35-5 (2004), *compiled in Assembly Resolutions in Force*, at I-44, ICAO Doc. 9848 (Oct. 8, 2004) [hereinafter ICAO Assemb. Res. A35-5].

<sup>63</sup> *Id.*



verse effects of aviation on the environment.<sup>64</sup> In 2004, the Assembly issued a resolution summarizing ICAO guidance on market-based emissions measures.<sup>65</sup> The resolution focused on the voluntary emission reduction efforts of member-states, emissions-based taxes and charges, and emissions trading.<sup>66</sup> The Assembly encouraged member-states to develop and implement voluntary emissions reduction measures and to report to the ICAO on the success of such measures.<sup>67</sup> The Assembly encouraged adherence to its earlier guidance on the implementation of taxes and charges and counseled against the unilateral implementation of emissions levies.<sup>68</sup> With respect to emissions trading, the Assembly endorsed the further development of an international trading system.<sup>69</sup> The Assembly contemplated two possible emissions trading systems: (1) an international developed and administered system by the ICAO, or (2) ICAO oversight of the integration of international aviation with pre-existing emissions trading regimes among member-states.<sup>70</sup>

The ICAO continues to work on developing guidance on an international aviation emissions trading regime.<sup>71</sup> Following its meeting in February of 2007, the CAEP announced recommendations for the inclusion of international aviation emissions in ICAO member-state trading systems.<sup>72</sup> The CAEP suggestions included: aircraft operators should be the regulated entity; operator obligations should be based on aggregated emissions of covered flights; CO<sub>2</sub> should initially be the only covered emission; and foreign operators should only be included on a mutually agreed upon basis while member-states continue to consider further options.<sup>73</sup> In May 2007, the ICAO hosted its second Colloquium on Aviation Emissions to elaborate on CAEP's most recent work and to

---

<sup>64</sup> Louise Mailett & Carl Burleson, *Aviation and the Environment: Finding a Balance*, 18 AIR & SPACE L. 4, 5 (2003).

<sup>65</sup> ICAO Assemb. Res. A35-5, *supra* note 62, at I-46.

<sup>66</sup> *Id.* at I-47 to I-48.

<sup>67</sup> *Id.* at I-47.

<sup>68</sup> *Id.*

<sup>69</sup> *Id.* at I-48.

<sup>70</sup> *Id.*

<sup>71</sup> Press Release, Int'l Civil Aviation Org., ICAO Commits to Aggressive Action on Aircraft Emissions (Sept. 28, 2007), *available at* [http://www.icao.int/icao/en/nr/2007/pio200710\\_e.pdf](http://www.icao.int/icao/en/nr/2007/pio200710_e.pdf) [hereinafter ICAO 2007 Assembly Meeting Climate Change Group Press Release] (describing the creation of a new Group on International Aviation and Climate Change at the Assembly's September 2007 meeting).

<sup>72</sup> Press Release, Int'l Civil Aviation Org., Participants of ICAO Environmental Meeting Agree on Guidance for Aviation Emissions Trading (Feb. 16, 2007), *available at* [http://www.icao.int/cgi/goto\\_m.pl?icao/en/nr/2007/pio200701\\_e.pdf](http://www.icao.int/cgi/goto_m.pl?icao/en/nr/2007/pio200701_e.pdf) (summarizing CAEP's guidance from its meeting in February 2007).

<sup>73</sup> *Id.*

inform the discussion of aviation mitigation measures among member-states.<sup>74</sup> At the Assembly meeting in September 2007, the ICAO agreed to create a new Group on International Aviation and Climate Change to facilitate the creation of an “implementation framework;” member-states may use this framework to achieve emissions reductions through market-based measures, as well as technological advances, operational measures, and improvements in air traffic management.<sup>75</sup>

#### D. *Bilateral ASAs*

An expansive network of bilateral ASAs between countries figures prominently in international aviation law.<sup>76</sup> The Convention devotes little attention to the establishment of multilateral agreements on economic rights.<sup>77</sup> Under the general guidance of Article 6, which provides that no scheduled international air service may occur without prior authorization, governments have negotiated economic rights through ASAs.<sup>78</sup> The agreement negotiated between the United States and United Kingdom in 1946—exchanging air traffic rights—served as an early prototype for ASAs.<sup>79</sup> In the years following, these ASAs proliferated between member-states, creating an extensive web of such agreements.<sup>80</sup> A modern bilateral agreement typically covers designation of carriers and routes, capacity, rates, discrimination and fair competition, security, and dispute resolution.<sup>81</sup>

There is a growing trend among member-states to negotiate multilateral *open skies* agreements that commit a larger number of states to decrease government restrictions on air transport services.<sup>82</sup> After years of negotiations, the United States and the EU, agreed upon the terms of a liberalized multilateral agreement to replace the web of ASAs be-

---

<sup>74</sup> Int'l Civil Aviation Org., *Colloquium on Aviation Emissions with Exhibition Programme*, available at <http://www.icao.int/envclq/clq07/ClqProgramme.pdf> (describing the ICAO colloquium planned for May 2007 to address international aviation emissions mitigation measures).

<sup>75</sup> ICAO 2007 Assembly Meeting Climate Change Group Press Release, *supra* note 71.

<sup>76</sup> Miller, *supra* note 29, at 707.

<sup>77</sup> *Id.* at 707–08.

<sup>78</sup> *Id.* at 708.

<sup>79</sup> Dempsey, *supra* note 57, at 238.

<sup>80</sup> *Id.*

<sup>81</sup> *Id.* at 239; *see, e.g.*, U.S. Dept. of State, Current Model Open Skies Agreement Text (Apr. 13, 2004), <http://www.state.gov/e/eeb/rls/othr/2008/19514.htm> [hereinafter U.S. Model Open Skies ASA].

<sup>82</sup> *See* ABEYRATNE, *supra* note 18, at 124.

tween the United States and individual EU member-states.<sup>83</sup> The agreement is designed to open the EU-U.S. market to greater competition to foster growth and lower fares.<sup>84</sup>

### E. *Dispute Resolution*

The frequent collision of commerce, culture, and politics figures prominently in international civil aviation.<sup>85</sup> Accordingly, in this setting disputes are to be anticipated.<sup>86</sup> Parties to international aviation disputes have, for the most part, been able to resolve these disputes through negotiation.<sup>87</sup> When negotiation fails, parties may seek resolution through the provisions of ASAs between member-states, dispute mechanisms provided for by the Convention through the ICAO, or adjudication before the International Court of Justice (ICJ).<sup>88</sup>

Modern ASAs typically provide means for dispute resolution beyond negotiation between the parties.<sup>89</sup> U.S. ASAs, for instance, provide that the parties to a dispute arising under the agreement may engage in binding arbitration through an ad hoc tribunal if consultations between the parties fail.<sup>90</sup> Recognizing the cost of arbitration, the ICAO has provided a model clause for ASAs.<sup>91</sup> According to the model clause, the parties to an unresolved dispute agree to submit to mediation—presided over by a panel of experts selected from a registry maintained by the ICAO—and to be bound by the panel's decision.<sup>92</sup> Because countries are the signatories of ASAs, disputes nominally occur between signatory states.<sup>93</sup> In practice, however, disputes may arise between airlines or an airline and a foreign airport or government.<sup>94</sup>

Article 84 of the Convention establishes a mechanism to resolve disputes between member-states over interpretation of the Convention or its annexes.<sup>95</sup> Article 84 provides: "If any disagreement between two

---

<sup>83</sup> Nicola Clark & Dan Bilefsky, *Amid Complaints on Both Sides, Europeans Accept Open Skies Accord with U.S.*, N.Y. TIMES, Mar. 23, 2007, at C8.

<sup>84</sup> *Id.*

<sup>85</sup> Dempsey, *supra* note 57, at 233.

<sup>86</sup> *Id.*

<sup>87</sup> *Id.* at 234.

<sup>88</sup> *Id.* at 233.

<sup>89</sup> *Id.* at 240–41.

<sup>90</sup> U.S. Model Open Skies ASA, *supra* note 81, art. 14.

<sup>91</sup> Dempsey, *supra* note 57, at 243.

<sup>92</sup> *Id.*

<sup>93</sup> *Id.*

<sup>94</sup> *Id.*

<sup>95</sup> Chicago Convention, *supra* note 22, art. 84.

or more contracting States relating to the interpretation or application of this Convention and its Annexes cannot be settled by negotiation, it shall, on the application of any State concerned in the disagreement, be decided by the Council.”<sup>96</sup> No member of the Council may vote on any dispute to which it is a party, and either party may appeal the decision of the Council to an ad hoc tribunal or to the ICJ.<sup>97</sup> Only five disputes have been submitted to the Council for judicial resolution, and the Council has not decided any of these disputes on the merits.<sup>98</sup>

An environmental regulation dispute heard by the ICAO, between the United States and member-states of the E.U., elucidates the contours of dispute resolution in the ICAO.<sup>99</sup> Concerned about the effect of engine noise on highly populated areas surrounding airports, the EU adopted engine noise standards stricter than the noise specifications contained in Annex 16 to the Convention.<sup>100</sup> Rather than purchasing new aircraft, many airlines complied with the stricter standards by retrofitting aircraft engines with “hushkits” that dampened engine noise.<sup>101</sup> EU member-states were not satisfied with this mode of compliance, as the hushkitted older planes were not as quiet as the new aircraft built to meet the stricter standards.<sup>102</sup> In response, the EU reworked its noise regulations to reflect a certain parameter of engine performance rather than an absolute decibel level.<sup>103</sup>

Carriers who had invested in hushkitting older planes, rather than replacing them with newer aircraft, risked a severe loss under the new standard.<sup>104</sup> Accordingly, the U.S. carrier Northwest Airlines, that’s fleet largely consisted of aging, hushkitted aircraft, filed a complaint with the U.S. Department of Transportation against the fifteen EU member-states.<sup>105</sup> The United States in turn filed a complaint under Article 84 of the Chicago Convention against the fifteen states on March 14, 2000.<sup>106</sup> Prior to this action, the Council had only heard disputes regarding airspace restrictions.<sup>107</sup>

---

<sup>96</sup> *Id.*

<sup>97</sup> *Id.*

<sup>98</sup> Dempsey, *supra* note 57, at 270–71.

<sup>99</sup> *Id.* at 277–86 (providing a summary and analysis of the U.S.-EU “hushkit” dispute).

<sup>100</sup> *Id.* at 278.

<sup>101</sup> *Id.* at 279.

<sup>102</sup> *Id.*

<sup>103</sup> *Id.* at 279–80.

<sup>104</sup> Dempsey, *supra* note 57, at 280.

<sup>105</sup> *Id.* at 280–81.

<sup>106</sup> *Id.* at 281.

<sup>107</sup> *Id.* at 278.

The EU filed preliminary objections to the U.S. action, arguing that the action was premature because the parties had failed to engage in adequate negotiations, the United States failed to exhaust local remedies, and the scope of the relief requested exceeded the authority of the ICAO.<sup>108</sup> Each party submitted a brief and gave oral arguments, and the Council in turn voted 26-0 in favor of the United States on the preliminary objections.<sup>109</sup> The parties accepted the Council's invitation in its decision to engage in negotiations to settle the dispute.<sup>110</sup> Then president of the ICAO, Dr. Assad Kotaite, assisted the parties in their discussions.<sup>111</sup> In October of 2001, the parties reached a preliminary agreement under which the United States would withdraw its ICAO complaint and the EU would repeal the engine parameter noise regulation; the parties finally settled the dispute on December 6, 2003.<sup>112</sup>

This dispute highlights the institutional priorities of the ICAO dispute resolution system.<sup>113</sup> Had the Council reached a decision on the merits, it might have provided valuable guidance on the open question of whether ICAO environmental standards are the maximum which may be imposed by member-states or a minimum upon which member-states may build.<sup>114</sup> However, the Council's preference to assist in a consensual settlement rather than decide the dispute on the merits suggests that the Council places a higher priority on ending disputes short of formal adjudication.<sup>115</sup>

Despite the ICJ's contributions to international law, few states accede to the jurisdiction of the court.<sup>116</sup> Of the twelve aviation disputes that have been brought before the ICJ, the court found it had jurisdiction in only two cases and only once reached the merits of the case.<sup>117</sup>

---

<sup>108</sup> *Id.* at 282–83.

<sup>109</sup> *Id.* at 283.

<sup>110</sup> Dempsey, *supra* note 57, at 285.

<sup>111</sup> *Id.*

<sup>112</sup> *Id.*

<sup>113</sup> *See id.* at 304 (noting that despite its broad adjudicatory powers, the ICAO Council has demonstrated a preference for resolving disputes through assisted negotiation short of formal adjudication).

<sup>114</sup> *Id.* at 286.

<sup>115</sup> *See id.* at 304.

<sup>116</sup> Dempsey, *supra* note 57, at 286–87.

<sup>117</sup> *Id.* at 287.

## II. THE PROPOSED DIRECTIVE

### A. *The EU ETS*

The proposal by the EC, the executive body of the EU, to include aviation within the EU ETS emerged from a sequence of events catalyzed by the Kyoto Conference of the United Nations Framework Convention on Climate Change.<sup>118</sup> As signatories to the Kyoto Protocol, the EU and its member-states obligated themselves to make measurable greenhouse gas emissions reductions.<sup>119</sup> EU environmental legislation has traditionally taken the form of command-and-control regulation.<sup>120</sup> Since the early 1990s though, there has been a growing interest in the EU in transitioning to market-based regulatory mechanisms, in large part due to the American experience with such regulation.<sup>121</sup> Confidence in emissions trading systems increased in the debate following Kyoto, as member states discussed low-cost means to attain the emissions reductions mandated by the Protocol.<sup>122</sup>

The ETS is an essential element of EU climate change policy and a key mechanism through which the EU aims to meet its Kyoto obligations.<sup>123</sup> Under the scheme, member-states allocate emissions allowances to emitters covered by the ETS.<sup>124</sup> Member-states cap the number of allowances, creating a market for carbon allowances.<sup>125</sup> Those emitting under their allotment may sell their surplus allowances, and emit-

---

<sup>118</sup> See *Proposed Directive*, *supra* note 11, at 2.

<sup>119</sup> Lefevre, *supra* note 7, at 77.

<sup>120</sup> *Id.* at 81.

Command-and-control systems are generally programs of centralized regulatory commands issued in excruciating detail via permits to pollution dischargers throughout a jurisdiction in order to implement environmental goals. Clean Air and Clean Water Acts permits issued by state agencies and EPA are archetypical command-and-control mechanisms, defining pollution standards in general and in very specific terms, and seeing that they are applied discharge by discharge.

ZYGMUNT J.B. PLATER ET AL., ENVIRONMENTAL LAW AND POLICY: NATURE, LAW, AND SOCIETY 587 (2d ed. 2008).

<sup>121</sup> Lefevre, *supra* note 7, at 82–83.

<sup>122</sup> Peter Zapfel, *Greenhouse Gas Emissions Trading in the EU: Building the World's Largest Cap-and-Trade Scheme*, in EMISSIONS TRADING FOR CLIMATE POLICY: US AND EUROPEAN PERSPECTIVES 162, 164 (Bernd Hansjürgens ed., 2005).

<sup>123</sup> CRS ETS REPORT, *supra* note 8, at 1.

<sup>124</sup> SALLY CAIRNS & CAREY NEWSON, PREDICT AND DECIDE: AVIATION, CLIMATE CHANGE AND UK CLIMATE POLICY 70 (2006), available at <http://www.eci.ox.ac.uk/research/energy/downloads/predictanddecide.pdf>.

<sup>125</sup> *Id.*

ters emitting beyond their allotment may purchase excess allowances.<sup>126</sup> The EC employed a phased implementation of the scheme to allow for periodic review of system strengths and weaknesses.<sup>127</sup> Phase I began on January 1, 2005, and is limited to CO<sub>2</sub> emissions from industrial installations in the energy, metal production, mineral, and paper industries, which account for approximately forty-five percent of EU CO<sub>2</sub> emissions.<sup>128</sup> Successive phases will expand the scheme to cover more greenhouse gases and industries while progressively tightening emissions caps.<sup>129</sup> Phase II is set to coincide with the first Kyoto Protocol commitment period, from 2008 to 2012.<sup>130</sup>

EU member-states construct National Allocation Plans to distribute emissions credits to units covered by the ETS.<sup>131</sup> The EC then reviews the allocation plans made by member-states.<sup>132</sup> During Phase I, the EC required that each state's allocation plan moved it toward its Kyoto commitment.<sup>133</sup> In Phase II, the EC will require that each state's allocation plan strictly complies with its Kyoto Protocol obligations.<sup>134</sup>

### B. *The Proposed Directive Itself*

#### 1. Mechanics of the Proposed Directive

The EC announced that the Proposed Directive would include aviation within the ETS on December 20, 2006.<sup>135</sup> The Proposed Directive would amend the existing EC directive by establishing that aviation would be a covered industry under the ETS.<sup>136</sup> Flights between EU airports will be included within the ETS by 2011.<sup>137</sup> The ETS will extend to all flights arriving at EU airports from outside the region or departing from EU airports headed outside the region by 2012.<sup>138</sup> In the interests

---

<sup>126</sup> *Id.*

<sup>127</sup> EC ETS BROCHURE, *supra* note 9, at 6.

<sup>128</sup> *Id.* at 7.

<sup>129</sup> CRS ETS REPORT, *supra* note 8, at 13; EC ETS BROCHURE, *supra* note 9, at 6.

<sup>130</sup> CRS ETS REPORT, *supra* note 8, at 2.

<sup>131</sup> *Id.* at 4.

<sup>132</sup> *Id.*

<sup>133</sup> *Id.*

<sup>134</sup> *Id.*

<sup>135</sup> *Proposed Directive*, *supra* note 11, at 1.

<sup>136</sup> *Id.* at 3.

<sup>137</sup> *Id.* at 6.

<sup>138</sup> *Id.*

of brevity and clarity, the latter group of flights will be referred to as “international” for the remainder of this Note.<sup>139</sup>

The Proposed Directive establishes individual airlines as the points of regulation.<sup>140</sup> Allowance allocation will occur at the EU-level, unlike the current ETS where allocation occurs at the member-state-level.<sup>141</sup> The EC will determine the total number of allowances to be distributed by average aviation emissions data from 2004 to 2006.<sup>142</sup> For aviation operators licensed in the EU, the Proposed Directive assigns monitoring and compliance responsibilities to the EU member-state in which each airline is licensed.<sup>143</sup> For non-EU aviation operators, the regulation assigns these responsibilities to the EU member-state in which each airline emits the largest quantity of CO<sub>2</sub>.<sup>144</sup> The Proposed Directive would integrate the airlines into the prior-existing ETS market so that the airlines could buy and sell allowances across industries.<sup>145</sup>

## 2. Rationale for Including Aviation in the ETS

Neither domestic nor international aviation emissions are currently included in the ETS.<sup>146</sup> While the Kyoto Protocol includes domestic aviation greenhouse gas emissions within the reduction targets for developed countries, it delegates responsibility to the ICAO to guide efforts to achieve international aviation emissions reductions.<sup>147</sup> While the inclusion of domestic aviation into the ETS for member-states is a partial solution to the emissions problem, the EC posits that any meaningful emissions reduction measures must also include international aviation because it accounts for the vast majority of EU flights.<sup>148</sup> While aviation accounts for only 3% of EU greenhouse gas emissions, the EC projects that by 2012, emissions from international

---

<sup>139</sup> While flights between EU member-states are technically “international” flights, they are subject to uniform EU regulation because they depart from and land within the region. This Note primarily focuses on the implications of the extension of the ETS to “international” flights, those arriving at an EU airport from outside the region or departing from an EU airport headed outside the region.

<sup>140</sup> *Proposed Directive*, *supra* note 11, at 6.

<sup>141</sup> *Id.*

<sup>142</sup> *Id.*

<sup>143</sup> *Id.* art. 18a(1)(a), at 19–20.

<sup>144</sup> *Id.* art. 18a(1)(b), at 20.

<sup>145</sup> *Id.* at 7.

<sup>146</sup> See EC ETS BROCHURE, *supra* note 9, at 7 (noting that Phase I of the ETS is limited to CO<sub>2</sub> emissions from industrial installations in the energy, metal production, mineral, and paper industries).

<sup>147</sup> Kyoto Protocol, *supra* note 60, art. 2.2.

<sup>148</sup> EC Communication on Reducing the Climate Change Impact of Aviation, *supra* note 13, at 2.



flights would increase by 150% from 1990 levels.<sup>149</sup> Growth at this rate would offset greater than 25% of EU Kyoto Protocol reductions.<sup>150</sup> The EC acknowledges the role that the Kyoto Protocol assigned to the ICAO in working toward international aviation emissions.<sup>151</sup> EU member-states continue to cooperate with ongoing ICAO work on such emissions.<sup>152</sup> The Commission has concluded, however, that comprehensive action in a new direction is required to effectively achieve international aviation emissions reductions.<sup>153</sup>

The EC anticipates that bringing aviation within the ETS will exert sufficient pressure on the industry to mitigate its adverse environmental impact.<sup>154</sup> Supporters of the regulation project that it will provide enhanced incentive for airlines to invest in developing more efficient technology.<sup>155</sup> In turn, the inclusion of aviation in the ETS will strengthen the carbon market, as air service providers will be able to buy and sell emissions allowances across industries.<sup>156</sup>

### III. POLITICAL, TECHNICAL, AND LEGAL IMPLICATIONS OF THE PROPOSED DIRECTIVE

The Proposed Directive's inclusion of international aviation in the ETS raises political, technical, and legal issues associated with the regulation.<sup>157</sup> While a variety of interests throughout the world have shown strong support for the regulation, aviation interests outside of the EU, particularly in the United States, have objected to the planned inclusion of international aviation.<sup>158</sup> Fundamentally, critics of the regulation are concerned that it amounts to unilateral action directed at a global problem which requires, for a number of reasons, a multilateral solution.<sup>159</sup> This concern informs political, technical, and legal critiques of the Proposed Directive.<sup>160</sup>

---

<sup>149</sup> *Id.*

<sup>150</sup> *Id.*

<sup>151</sup> *Id.* at 4.

<sup>152</sup> *Id.* at 5.

<sup>153</sup> *Id.*

<sup>154</sup> CAIRNS & NEWSON, *supra* note 124, at 70.

<sup>155</sup> *Id.*

<sup>156</sup> *Id.*

<sup>157</sup> See discussion *infra* Part III.A–C. The analysis in this Part is limited to the implications of including international aviation in the ETS.

<sup>158</sup> See Pilling & Thompson, *supra* note 14 and accompanying text.

<sup>159</sup> See U.S.-EU Mission Open Skies Press Release, *supra* note 15 and accompanying text.

<sup>160</sup> See *id.*

### A. Political Implications

The primary political issue at stake is the identity of the appropriate regulatory body entrusted to pursue emissions mitigation measures in international aviation.<sup>161</sup> Airlines, trade groups, and governments outside of the EU are skeptical as to whether the EC is the appropriate body to pursue emissions reductions in international aviation.<sup>162</sup> They argue that the climate change effects of international aviation emissions present a global problem requiring a global solution.<sup>163</sup> Accordingly, these proponents advocate that the ICAO and the existing international aviation regulatory framework is the appropriate forum in which to pursue international aviation emissions reductions.<sup>164</sup>

Further, non-EU aviation representatives argue that the Proposed Directive inappropriately would force the EU's preferred brand of climate change policy on other regions of the world.<sup>165</sup> These interests argue that the Proposed Directive ignores the fact that countries' individual political and economic climates determine the shape of effective regulation.<sup>166</sup> Developing countries, in particular, have argued that extension of the ETS to international aviation interferes with their pursuit of a number of other emissions reduction measures that are more suited to their regulatory agendas.<sup>167</sup>

---

<sup>161</sup> See Press Release, Air Transp. Ass'n [ATA], ATA Statement Regarding EC Decision on Emissions Trading (Dec. 20, 2006), *available at* [http://www.airlines.org/news/releases/2006/statement\\_12-20-06.htm](http://www.airlines.org/news/releases/2006/statement_12-20-06.htm) [hereinafter ATA Statement Regarding EC Emissions Trading].

<sup>162</sup> See Kim Rahn, *Korea Faces EU Emissions Rule*, KOREA TIMES, Feb. 8, 2007, *available at* 2007 WLNR 2571034 (noting the South Korean government's formation of a task force out of concern for the impact of the Proposed Directive on Korean airlines and the government's intention to cooperate with non-EU opposition to the Proposed Directive); ATA Statement Regarding EC Emissions Trading, *supra* note 161 (noting the opposition of the Air Transport Association, which represents the U.S. aviation providers responsible for more than ninety percent of U.S. cargo and passenger traffic).

<sup>163</sup> See IPCC Report, *Aviation and the Global Atmosphere*, *supra* note 1, at 3 ("Because carbon dioxide has a long atmospheric residence time ( $\approx 100$  years) and so becomes well mixed throughout the atmosphere, the effects of its emissions from aircraft are indistinguishable from the same quantity of carbon dioxide emitted by any other source."); U.S.-EU Mission Open Skies Press Release, *supra* note 15 ("It is the antithesis of a global solution that we need through the International Civil Aviation Organization to address a global problem, namely the issue of aviation emissions." (quoting DAS Byerly)).

<sup>164</sup> See U.S.-EU Mission Open Skies Press Release, *supra* note 15.

<sup>165</sup> See Press Release, U.S. Dept. of State, United States Questions European Aviation Emission Trading Scheme (Dec. 2, 2005), *available at* <http://usinfo.state.gov/gi/Archive/2005/Dec/05-48743.html> [hereinafter FAA/EC Roundtable Press Release] (noting that the state of the aviation industry in the EU might require different emissions reduction measures than in the United States).

<sup>166</sup> See *id.*

<sup>167</sup> Pilling & Thompson, *supra* note 14. The authors note the Asian airline view that:

### B. Technical Implications

The technical design of the Proposed Directive's inclusion of international aviation in the ETS raises concerns among opponents of the regulation.<sup>168</sup> Design concerns include criticism of the choice of regulatory instrument, emissions credit allocation, compliance and enforcement measures, and system coverage.<sup>169</sup> These concerns are discussed briefly below as they relate to the political and legal issues discussed herein.<sup>170</sup>

Critics of the Proposed Directive's inclusion of international aviation in the ETS have questioned the selection of emissions trading to pursue international aviation emissions reductions.<sup>171</sup> U.S. aviation representatives believe that the international aviation industry first should pursue an overhaul of the air traffic management (ATM) system to realize emissions reductions more quickly and at a lower cost.<sup>172</sup> Under this approach, ATM directors might achieve emissions reductions by changing taxiing and flight patterns of aircraft in inter-

---

Green issues are high on the political agenda in the region, but the big ticket issues for the region at large are air and water quality and industrial effluents. This is part of the reason why [the Association of Asia Pacific Airlines (AAPA)] has come down hard against what it says is the [EC's] "unilateral" and "premature" approach to including aviation in its Emissions Trading Scheme (ETS). "It is gesture politics rather than addressing the global issue of climate change," says [Andrew Herdman, Director General of the AAPA].

*Id.*

<sup>168</sup> See, e.g., Pilling & Thompson, *supra* note 14 (summarizing technical concerns with the Proposed Directive in different regions of the world); Rahn, *supra* note 162 (noting that an emissions trading scheme would disproportionately burden long-haul carriers who travel longer distances).

<sup>169</sup> See discussion *infra* notes 171–190.

<sup>170</sup> This Note does not purport to provide a comprehensive review of an international aviation emissions trading scheme. See generally CE, GIVING WINGS TO EMISSION TRADING, INCLUSION OF AVIATION UNDER THE EUROPEAN EMISSION TRADING SYSTEM (ETS): DESIGN AND IMPACTS (2005), available at [http://ec.europa.eu/environment/climat/pdf/aviation\\_et\\_study.pdf](http://ec.europa.eu/environment/climat/pdf/aviation_et_study.pdf) [hereinafter CE REPORT] (reviewing system design, environmental and economic impacts, and legal implications of international aviation emissions trading).

<sup>171</sup> See Pilling & Thompson, *supra* note 14 (noting suggested alternative approaches to emissions reductions).

<sup>172</sup> *Id.*; U.S.-EU Mission Open Skies Press Release, *supra* note 15 (noting that aviation representatives should focus on overhauling air traffic management in the near term before turning to emissions trading). But see David Hughes, *ATC Paths on Two Continents: Different Winds Buffet Air Traffic System Makeovers in Europe and the U.S.*, AVIATION WEEK & SPACE TECH., Feb. 19, 2007, at 98 (noting that air traffic management improvements are on-track in the EU, while U.S. efforts are encountering difficulties).

national aviation.<sup>173</sup> These interests argue that extension of the ETS to international aviation discourages governments from improving ATM efficiency.<sup>174</sup> Critics of the Proposed Directive also have argued that emissions trading will not provide the incentive to improve fuel efficiency anticipated by the EC.<sup>175</sup> They contend that a number of concerns, including weak economies and security issues, have forced international aviation to become a highly efficient industry that closely accounts for all costs, especially those attributable to fuel.<sup>176</sup>

Related to trading, the emissions credit allocation used in the Proposed Directive has raised concerns.<sup>177</sup> The Proposed Directive contemplates initially auctioning a small amount of emissions credits and distributing the majority of emissions credits to air service providers at no cost calculated by prior emissions.<sup>178</sup> Critics of the regulation have argued that airlines that receive free emissions credits may pass the cost directly to consumers and thus realize windfall profits.<sup>179</sup> According to these critics, this windfall would undercut the credibility of emissions trading as a serious climate change harm-mitigation measure.<sup>180</sup> Aviation representatives also have expressed concern that the lack of a committed number of emissions credits set aside for startup airlines would hinder entrance to the market while favoring incumbent airlines.<sup>181</sup>

The monitoring and compliance scheme for non-EU carriers might also raise concerns.<sup>182</sup> The Proposed Directive assigns monitoring and compliance responsibilities for non-EU airlines to the EU member-state in which each airline emits the largest quantity of CO<sub>2</sub>.<sup>183</sup> Accordingly, under this scheme an administering state would be responsible for ensuring compliance with the ETS for its own airlines and

---

<sup>173</sup> U.S.-EU Mission Open Skies Press Release, *supra* note 15.

<sup>174</sup> *Id.*

<sup>175</sup> Ven Sreenivasan, *Will New EU Emission Rules for Carriers Work? Implementing Open Skies May Be More Effective*, BUS. TIMES (Singapore), Jan. 2, 2007, available at 2007 WLNR 27676.

<sup>176</sup> *Id.*

<sup>177</sup> See Press Release, WWF-UK, Aviation to Gain Massive Profits from Emissions Trading (Dec. 18, 2006), available at [http://www.wwf.org.uk/news/n\\_0000003311.asp](http://www.wwf.org.uk/news/n_0000003311.asp) [hereinafter WWF Press Release].

<sup>178</sup> *Proposed Directive*, *supra* note 11, at 6.

<sup>179</sup> See WWF Press Release, *supra* note 177.

<sup>180</sup> *Id.*

<sup>181</sup> Aimee Turner, *Trading Plan Could Hinder Start-Ups*, FLIGHT INT'L, May 29, 2007, available at 2007 WLNR 17188957.

<sup>182</sup> See *Proposed Directive*, *supra* note 11, art. 18a(1)(b), at 20 (assigning monitoring and compliance responsibilities for non-EU carriers to the EU member-state in which each airline emits the largest quantity of CO<sub>2</sub>).

<sup>183</sup> *Id.*

presumably their biggest international competitors.<sup>184</sup> Non-EU aviation interests might criticize this arrangement, questioning its inherent fairness while noting the administering state's temptation to engage in protectionist enforcement to the detriment of non-EU operators.<sup>185</sup>

Commentators in and outside of the EU have criticized the scope of coverage of the Proposed Directive, fearing market distortions.<sup>186</sup> Representatives of EU aviation interests have expressed concern that the Proposed Directive, even after the inclusion of international flights, will place an increased burden on airlines operating in the EU to the benefit of carriers outside of the EU.<sup>187</sup> Air service providers have warned that they may consider rerouting their services to elude the reach of the ETS.<sup>188</sup> In the EU, the German carrier Lufthansa has threatened to relocate to Zurich, Switzerland—a non-EU state—to sidestep the ETS if the Proposed Directive takes effect.<sup>189</sup> Non-EU operators, such as Asian carriers, may use hubs in other regions for flights that previously would have gone through the EU.<sup>190</sup>

### C. Legal Implications

Concern about the political and technical implications of the Proposed Directive's inclusion of international aviation in the ETS informs legal critiques of the regulation.<sup>191</sup> EU aviation representatives argue that the Proposed Directive is within the EC's authority under the existing international aviation regulatory framework.<sup>192</sup> EU proponents of the Proposed Directive liken the extension of the ETS to international aviation to admission and departure requirements permitted under the

---

<sup>184</sup> See *id.*

<sup>185</sup> See Brett Frischmann, *Using the Multi-Layered Nature of International Emissions Trading and of International-Domestic Legal Systems to Escape a Multi-State Compliance Dilemma*, 13 GEO. INT'L ENVTL. L. REV. 463, 475–80 (noting the general problem of incentive to cheat in multilateral trading systems).

<sup>186</sup> See Aimee Turner, *Lufthansa Threatens to Move to Zurich to Evade Green Plan*, FLIGHT INT'L, Feb. 20, 2007, at 6 [hereinafter Turner, *Lufthansa Threatens to Move to Zurich to Evade Green Plan*]; U.S.-EU Mission Open Skies Press Release, *supra* note 15 ("We're are also concerned that the Commission proposal would lead to market distortion . . .").

<sup>187</sup> Turner, *Lufthansa Threatens to Move to Zurich to Evade Green Plan*, *supra* note 186, at 6.

<sup>188</sup> *Id.*

<sup>189</sup> *Id.*

<sup>190</sup> Aimee Turner, *USA Ready to Fight Over Emissions Trading Plan*, FLIGHT INT'L, Dec. 5, 2006, at 8 [hereinafter Turner, *USA Ready to Fight*].

<sup>191</sup> See *id.* at 8 ("These proposals, if they include international aviation, do not have much chance of standing an international legal challenge. The objective of reducing aviation's environmental footprint is not a point of big disagreement the question is how to do it." (quoting Andrew Steinberg, U.S. Assistant Secretary of Transportation)).

<sup>192</sup> CE REPORT, *supra* note 170, at 175–81.

Chicago Convention and ASAs.<sup>193</sup> Article 1 of the Chicago Convention provides that each signatory state has exclusive sovereignty over the airspace above its territory.<sup>194</sup> Article 6 provides that no scheduled air service may occur above each signatory state without prior authorization, according to the terms of the signatory state.<sup>195</sup> Under Article 11, signatory states may apply admission and departure requirements to aircraft in international aviation entering or leaving the state so long as they are applied without distinction as to nationality and conform with the provisions of the Chicago Convention.<sup>196</sup> EU aviation representatives argue that, taken together, these provisions support the route-based extension of the ETS to international aviation according to either the point of departure or arrival.<sup>197</sup>

EU aviation representatives further argue that extending the ETS to international aviation accords with the Chicago Convention and ICAO guidance on emissions-mitigation measures.<sup>198</sup> The Kyoto Protocol requires that signatory states, including all EU member-states, pursue international aviation emissions reductions through the ICAO.<sup>199</sup> The EC notes that the ICAO CAEP, at its September 2004 meeting, declined to issue a legal instrument to coordinate emissions trading through ICAO.<sup>200</sup> *ICAO Assembly Resolution 35-5*, issued in October, 2004, in part, endorses an open emissions trading system for international aviation and contemplates either an ICAO-supported voluntary trading system or the extension of ICAO member-states' trading systems to international aviation.<sup>201</sup> Proponents of the Proposed Directive read this guidance as endorsing the extension of the ETS to international aviation.<sup>202</sup> While the majority of ICAO member-states agreed at the ICAO Assembly's September 2007 meeting that member-states should not apply an emissions trading system to other states' aircraft operators except on the basis of mutual agreement, the EU states entered a formal reservation, arguing that no provision in the Chicago

---

<sup>193</sup> *Id.* at 176.

<sup>194</sup> Chicago Convention, *supra* note 22, art. 1.

<sup>195</sup> *Id.* art. 6.

<sup>196</sup> *Id.* art. 11.

<sup>197</sup> CE REPORT, *supra* note 170, at 176–77; see also *Commission Staff Working Document, Impact Assessment*, at 10–11, COM (2006) 818 final (Dec. 20, 2006) [hereinafter *EC ETS Impact Assessment*] (noting that route-based coverage accords with UN and ICAO guidance).

<sup>198</sup> CE REPORT, *supra* note 170, at 178.

<sup>199</sup> Kyoto Protocol, *supra* note 60, art. 2.2.

<sup>200</sup> *Proposed Directive*, *supra* note 11, at 3.

<sup>201</sup> ICAO Assemb. Res. A35-5, *supra* note 62, at I-48.

<sup>202</sup> CE REPORT, *supra* note 170, at 178.

Convention required a state to seek mutual consent prior to application of market-based measures.<sup>203</sup>

Opponents of the Proposed Directive, however, may scrutinize the regulation under the Chicago Convention, ASAs, and general principles of international law.<sup>204</sup> These detractors might argue that that Proposed Directive amounts to an impermissible operating requirement, tax, or charge, or, alternatively, that the EC lacks jurisdiction to prescribe emissions regulation to operators in international aviation.<sup>205</sup>

### 1. Impermissible Operating Requirement Argument

Opponents of the Proposed Directive may argue that the regulation would impermissibly regulate aircraft operation in contravention of the Chicago Convention or ASAs.<sup>206</sup> Article 12 of the Chicago Convention requires that aircraft of each signatory state comply with the rules relating to “flight and maneuver” of the states in which they are operating.<sup>207</sup> Article 12 further provides, “Over the high seas, the rules in force shall be those established under this Convention.”<sup>208</sup> Article 11 of the *U.S. Model Open Skies Agreement* provides:

[N]either Party shall unilaterally limit the volume of traffic, frequency or regularity of service, or the aircraft type or types operated by the designated airlines of the other Party, except as may be required for customs, technical, operational, or environmental reasons under uniform conditions consistent with Article 15 of the Convention.<sup>209</sup>

---

<sup>203</sup> Jeffrey N. Shane, Undersecretary of Transportation for Policy, Remarks at the American Bar Association Forum on Air & Space (Oct. 4, 2007), *available at* 2007 WLNR 19707583.

<sup>204</sup> See U.S.-EU Mission Open Skies Press Release, *supra* note 15.

<sup>205</sup> See discussion *infra* Part III.C.1–3.

<sup>206</sup> See Chicago Convention, *supra* note 22, art. 12; U.S. Model Open Skies ASA, *supra* note 81, art. 11.

<sup>207</sup> Chicago Convention, *supra* note 22, art. 12. The source states:

Each contracting State undertakes to adopt measures to insure that every aircraft flying over or maneuvering within its territory and that every aircraft carrying its nationality mark, wherever such aircraft may be, shall comply with the rules and regulations relating to the flight and maneuver of aircraft there in force.

*Id.*

<sup>208</sup> *Id.*

<sup>209</sup> U.S. Model Open Skies ASA, *supra* note 81, art. 11; *see also* Air Transport Agreement Between the United States of America and the Federal Republic of Germany, U.S.-Ger., art. 8, July 7, 1955, 7 U.S.T. 527, *available at* 1956 WL 54731 [hereinafter U.S.-Germany ASA].

In light of these provisions, opponents of the Proposed Directive might argue that it violates Article 12 of the Chicago Convention because it would impose operating requirements on aircraft in international aviation over the high seas.<sup>210</sup> Alternatively, they might argue that the regulation would violate the above provisions of ASAs prohibiting the unilateral imposition of operating requirements on aircraft in international aviation.<sup>211</sup>

The critical issue under such challenges would be whether the Proposed Directive's inclusion of international aviation in the ETS amounts to aircraft operation regulation.<sup>212</sup> EU aviation representatives contend that including international aviation in the ETS would only impose admission and departure requirements permissible under the Chicago Convention and ASAs;<sup>213</sup> they argue that any change in aircraft operation would result from a conscious business decision by the aviation provider.<sup>214</sup> Skeptics of the regulation also might assert that the EC fundamentally intended the Proposed Directive to affect aircraft operation.<sup>215</sup> A cap-and-trade emissions system operates on the regulated entities by creating incentives and consequences for engaging in a regulated activity.<sup>216</sup> For instance, in contemplating the effect of extending the ETS to developing countries that's airlines may have older, less efficient aircraft, the EC noted that such airlines could consider using their most efficient planes to serve the EU to lessen the impact of the ETS.<sup>217</sup>

---

<sup>210</sup> See Chicago Convention, *supra* note 22, art. 12.

<sup>211</sup> See U.S. Model Open Skies ASA, *supra* note 81, art. 11.

<sup>212</sup> See CE REPORT, *supra* note 170, at 176 (arguing that the ETS would not amount to operation regulation).

<sup>213</sup> *Id.*

<sup>214</sup> See *id.* at 180.

<sup>215</sup> Michael B. Jennison, Address at the International Air Transport Association (IATA) Legal Seminar in Istanbul, Turkey: Some Points on Aviation Emissions Regulation (Feb. 2007) (on file with *Boston College Environmental Affairs Law Review*). Jennison states:

A sharp lawyer might argue that an emissions trading system, however, does not limit the volume of traffic, frequency or regularity of service, or types of aircraft operated. Rather, he or she might say that any such effects of an ETS would have resulted from the independent business decisions of the operators. This would be plainly disingenuous, however. If a regulatory tool that is designed to suppress aviation (by increasing its costs, to serve a greater global good) has the effect of suppressing aviation, how can this be considered an unintended consequence? Surely a government intervention in the market that induces operators to make decisions that result in reduced service or choice of equipment can be considered to intend that result.

*Id.*

<sup>216</sup> CAIRNS & NEWSON, *supra* note 124, at 70.

<sup>217</sup> EC ETS Impact Assessment, *supra* note 197, at 52.



Opponents of the Proposed Directive might argue that this demonstrates a clear intent to impose operation regulation on aircraft in violation of either Article 12 of the Chicago Convention or ASAs.<sup>218</sup> It is reasonable to expect that the effect of the ETS on aircraft operation would become more dramatic as successive phases of the ETS featured more stringent emissions standards, as contemplated by the EC.<sup>219</sup>

Further, the nature of the regulated activity, CO<sub>2</sub> emission, may suggest that the EC proposal would impermissibly regulate aircraft operation over the high seas.<sup>220</sup> After 2012, the ETS would cover, for example, an American flight departing New York bound for Paris.<sup>221</sup> The majority of the regulated activity would occur outside of the EU, over the high seas. Accordingly, critics of the regulation may argue that it impermissibly amounts to another layer of operation regulation in an area in which the Chicago Convention has reserved rulemaking authority to itself.<sup>222</sup>

## 2. Impermissible Charge or Tax Argument

Non-EU aviation interests might challenge the Proposed Directive's inclusion of international aviation in the ETS as an impermissible charge or tax under the Chicago Convention or ASAs.<sup>223</sup> Article 15 of the Chicago Convention allows aviation facilities and services providers to assess charges to recover their costs.<sup>224</sup> Subsequent ICAO guidance elaborates on Article 15 and suggests that charges should not exceed the identifiable costs of facilities or services provided.<sup>225</sup> Article 10 of the U.S. Model Open Skies Agreement echoes the close correlation between user charges and actual costs incurred by facilities and services providers, and requires that charges be related to costs makes this cor-

---

<sup>218</sup> See Jennison, *supra* note 215 and accompanying text.

<sup>219</sup> See CRS ETS REPORT, *supra* note 8, at 13.

<sup>220</sup> See Chicago Convention, *supra* note 22, art. 12.

<sup>221</sup> See *Proposed Directive*, *supra* note 11, at 6.

<sup>222</sup> See Chicago Convention, *supra* note 22, art. 12.

<sup>223</sup> See Press Release, James L. Connaughton, Chairman of the White House Council on Env'tl. Quality, The President's Comprehensive Climate Strategy and the Clean Coal Initiative (Nov. 30, 2006), available at <http://fpc.state.gov/fpc/77170.htm> [hereinafter Connaughton Press Release] (arguing that the ETS would amount to a tax on international aviation); FAA/EC Roundtable Press Release, *supra* note 165 (noting that there are a number of unresolved legal issues surrounding whether the ETS might be interpreted as a charge on international aviation).

<sup>224</sup> Chicago Convention, *supra* note 22, art. 15.

<sup>225</sup> ICAO Policies on Charges, *supra* note 43, at 3, 12.

relation mandatory.<sup>226</sup> Article 15 of the Chicago Convention also prohibits the imposition of a charge based solely on a right of transit, exit, or entry.<sup>227</sup>

Mindful of these provisions, opponents of the Proposed Directive might argue that extension of the ETS to international aviation imposes an impermissible charge that exceeds any identifiable cost under Article 15 of the Chicago Convention, elaborated upon by subsequent nonbinding guidance, or ASAs.<sup>228</sup> Alternatively, critics might argue that the ETS amounts to an impermissible charge based solely on the right of entry or exit under Article 15 of the Chicago Convention.<sup>229</sup>

Non-EU aviation interests may also claim that the extension of the ETS to international aviation amounts to an impermissible tax under the Chicago Convention or ASAs.<sup>230</sup> Article 24 exempts fuel arriving on board from a “customs duty” and other charges.<sup>231</sup> Subsequent ICAO guidance on taxation suggests that this exemption extends to “import, export, excise, sales, consumption and internal duties and taxes of all kinds levied upon the fuel.”<sup>232</sup> Further, Article 9 of the U.S. Model Open Skies Agreement contains a reciprocal exemption from national taxes on fuel on aircraft in international aviation.<sup>233</sup> Accordingly, opponents of the Proposed Directive might argue that extension of the ETS to international aviation would amount to an impermissible tax on fuel in international aviation under the Chicago Convention or ASAs because it would effectively impose a cost on aviation operators as a function of fuel consumption.<sup>234</sup>

The plausibility of these challenges would turn on whether the ETS could be distinguished from a charge or tax. EU aviation representatives argue that emissions trading is contemplated by neither the Chi-

---

<sup>226</sup> U.S. Model Open Skies ASA, *supra* note 81, art. 10; *see also* U.S.-Germany ASA, *supra* note 209, art. 7*bis*.

<sup>227</sup> Chicago Convention, *supra* note 22, art. 15.

<sup>228</sup> *See* Chicago Convention, *supra* note 22, art. 15; U.S. Model Open Skies ASA, *supra* note 81, art. 10.

<sup>229</sup> *See* Chicago Convention, *supra* note 22, art. 15.

<sup>230</sup> *See* Connaughton Press Release, *supra* note 223 (quoting James Connaughton, Chairman of the White House Council on Environmental Quality, “It’s a tax. I mean, it goes right to the customer, it goes to the bottom line of what it costs to fly. So you know, let’s just call it what it is. It’s a tax”).

<sup>231</sup> *See* Chicago Convention, *supra* note 22, art. 24.

<sup>232</sup> ICAO Policies on Taxation, *supra* note 43, at 4.

<sup>233</sup> U.S. Model Open Skies ASA, *supra* note 81, art. 9; *see also* U.S.-Germany ASA, *supra* note 209, art. 7.

<sup>234</sup> *See* Chicago Convention, *supra* note 22, art. 24; U.S. Model Open Skies ASA, *supra* note 81, art. 9.

ago Convention nor ASAs and that it is distinct from a charge or tax.<sup>235</sup> Non-EU aviation interests would likely rebut that the extension of the ETS to international aviation would amount to a charge or tax because it would unilaterally impose costs on aviation operators.<sup>236</sup>

### 3. Jurisdiction to Prescribe Argument

Apart from the existing international aviation regulatory framework, opponents of the Proposed Directive may challenge whether the EC or EU member-states have jurisdiction to prescribe CO<sub>2</sub> emissions regulation extraterritorially.<sup>237</sup> The *Restatement (Third) of Foreign Relations Law of the United States (Restatement)* reflects modern international law's treatment of a state's jurisdiction to prescribe extraterritorial regulation.<sup>238</sup> Section 402(1)(c) of the *Restatement* provides that a state has jurisdiction to prescribe law with respect to "conduct outside its territory that has or is intended to have substantial effect within its territory."<sup>239</sup> Section 403(1) provides, "Even when one of the bases of jurisdiction under § 402 is present, a state may not exercise jurisdiction to prescribe law with respect to a person or activity having connections with another state when the exercise of such jurisdiction is unreasonable."<sup>240</sup> Section 403(2) elaborates on the factors used to determine whether exercise of jurisdiction is unreasonable, including:

- (a) the link of the activity to the territory of the regulating state, i.e., the extent to which the activity takes place within the territory, or has substantial, direct, and foreseeable effect upon or in the territory;
- (b) the connections, such as nationality, residence, or economic activity, between the regulating state and the person principally responsible for the activity to be regulated, or between that state and those whom the regulation is designed to protect;

---

<sup>235</sup> CE REPORT, *supra* note 170, at 175–77.

<sup>236</sup> See Jennison, *supra* note 215 ("To the extent that a unilateral scheme imposes costs, limits a carrier's operations or both, it is the functional equivalent of a levy that is not related to the costs or providing any aeronautical facilities or services.").

<sup>237</sup> See *id.*

<sup>238</sup> See RESTATEMENT (THIRD) OF FOREIGN RELATIONS LAW OF THE UNITED STATES §§ 402–403 (1987); Gerald F. Hess, *The Trail Smelter, the Columbia River, and the Extraterritorial Application of CERCLA*, 18 GEO. INT'L ENVTL. L. REV. 1, 43 (2005).

<sup>239</sup> RESTATEMENT (THIRD) OF FOREIGN RELATIONS LAW OF THE UNITED STATES § 402(1)(c).

<sup>240</sup> *Id.* § 403(1).

(c) the character of the activity to be regulated, the importance of regulation to the regulating state, the extent to which other states regulate such activities, and the degree to which the desirability of such regulation is generally accepted;

(d) the existence of justified expectations that might be protected or hurt by the regulation;

(e) the importance of the regulation to the international political, legal, or economic system;

(f) the extent to which the regulation is consistent with the traditions of the international system;

(g) the extent to which another state may have an interest in regulating the activity; and

(h) the likelihood of conflict with regulation by another state.<sup>241</sup>

Opponents of the extension of the ETS to international aviation might argue that the EC lacks jurisdiction to prescribe CO<sub>2</sub> regulation extraterritorially because such regulation would be unsupported by a *substantial effect* in EU territory.<sup>242</sup> Critics of the regulation might argue that non-EU carriers, serving the EU, engaged in international aviation primarily over the high seas and foreign countries do not produce a substantial effect in EU territory.<sup>243</sup> Further, they might argue that aviation emissions, accounting for two percent of global CO<sub>2</sub> emissions, do not produce a substantial effect on the long-term impacts of climate change, the ultimate regulatory aim of the Proposed Directive.<sup>244</sup>

Non-EU aviation interests would likely argue that even if the EC and EU member-states could show that international aviation emissions produced a substantial effect in the EU, it should refrain from exercising jurisdiction because doing so would be unreasonable.<sup>245</sup> In light of sections 403(2)(a) and (c) of the *Restatement*, critics of the regulation might scrutinize the connection between the regulated activity and the regulating entity.<sup>246</sup> They might argue that in extend-

---

<sup>241</sup> *Id.* § 403(2)(a)–(h).

<sup>242</sup> See Jennison, *supra* note 215.

<sup>243</sup> See *id.*

<sup>244</sup> *Proposed Directive*, *supra* note 11, at 2 (noting that the objective of the Proposed Directive is to mitigate the climate change impact of aviation emissions); IPCC Report, *Aviation and the Global Atmosphere*, *supra* note 1, at 6 (noting that aviation accounts for two percent of global CO<sub>2</sub> emissions); Jennison, *supra* note 215.

<sup>245</sup> See RESTATEMENT (THIRD) OF FOREIGN RELATIONS LAW OF THE UNITED STATES § 403(2)(a)–(h).

<sup>246</sup> See *id.* § 403(2)(a), (c).

ing the ETS to international aviation, the EC would attempt to regulate an activity—CO<sub>2</sub> emission—that occurs largely in international territory and that yields a global rather than localized effect.<sup>247</sup> Under section 403(2)(c), opponents might argue that the importance of international aviation to the world economy and its service of a critical, unique need counsel against unilateral, regional implementation of regulation that would drastically affect international aviation.<sup>248</sup> Under section 403(f), critics might find that the Proposed Directive would be a radical departure from the traditions of international aviation regulation.<sup>249</sup> Lastly, opponents might argue that according to sections 403(g) and (h) the Proposed Directive's extension of the ETS to international aviation would be at odds with the efforts of the ICAO and its member-states in regulating aviation emissions.<sup>250</sup>

States' jurisdiction to prescribe extraterritorial regulation aimed at activities that affect climate change remains an open question.<sup>251</sup> EU aviation interests would likely dispute whether the extension of the ETS to international aviation amounts to an extraterritorial application of EU law; rather, as noted above, they would likely argue that the Proposed Directive only imposes admission and departure requirements on aviation operators serving the EU.<sup>252</sup> Notwithstanding this objection, if the Proposed Directive were recast as extraterritorially prescribing emissions regulation, EU aviation interests might argue that international aviation indeed produces a substantial effect within the EU, providing the basis for reasonable extraterritorial jurisdiction.<sup>253</sup>

#### D. *Potential Dispute Resolution Pathways*

Opponents of the regulation may attempt to forestall implementation of the Proposed Directive through diplomatic channels, adjudication before the ICAO, dispute resolution under ASAs, or challenges in national courts.<sup>254</sup> Supporters and opponents of the Proposed Directive

---

<sup>247</sup> See *id.*

<sup>248</sup> See *id.* § 403(2)(c).

<sup>249</sup> See *id.* § 403(f).

<sup>250</sup> See *id.* § 403(g)–(h).

<sup>251</sup> See Francesco Francioni, *Extraterritorial Application of Environmental Law*, in *EXTRATERRITORIAL JURISDICTION IN THEORY AND PRACTICE* 122, 122 (Karl M. Meessen ed., 1996) (noting that extraterritorial application of environmental law is largely unexplored); Jennison, *supra* note 215.

<sup>252</sup> See CE REPORT, *supra* note 170, at 176.

<sup>253</sup> See RESTATEMENT (THIRD) OF FOREIGN RELATIONS LAW OF THE UNITED STATES §§ 402(1)(c), 403(2).

<sup>254</sup> See discussion *infra* notes 255–273.

will continue to evaluate the merits of each of these pathways while the European Parliament and Council consider the regulation in the codification process.<sup>255</sup>

Opponents of the Proposed Directive will continue to employ diplomatic efforts to prevent the extension of the ETS to international aviation.<sup>256</sup> Aviation representatives in the U.S. government have stated that they will continue to work with their EU counterparts to ensure that the ETS is not extended to international aviation.<sup>257</sup> Non-EU aviation representatives critical of the regulation continue to coordinate their resistance to the Proposed Directive.<sup>258</sup> The ICAO provides a forum for diplomatic contact between supporters and critics of the regulation.

Opponents of the Proposed Directive might also seek redress under the provisions of ASAs.<sup>259</sup> As discussed above, non-EU critics of the regulation might find that the proposed extension of the ETS to international aviation would contravene provisions of ASAs.<sup>260</sup> Accordingly, these interests, whether airlines or government officials, might lobby the aggrieved state party to the agreement to initiate consultations, as provided by the ASA, with an EU member-state regarding interpretation of the agreement.<sup>261</sup> If consultations fail to yield an understanding acceptable to both parties, either party may then refer the dispute to arbitration as provided by the ASA.<sup>262</sup> Alternatively, opponents of the Proposed Directive's extension of the ETS to international aviation might press a state party to consider retaliatory economic measures under the ASA.<sup>263</sup>

Non-EU ICAO member-states may also challenge the Proposed Directive's extension of the ETS to international aviation pursuant to Article 84 of the Chicago Convention.<sup>264</sup> Comparing the opposition to the Proposed Directive to the Hushkit Dispute may offer insight into

---

<sup>255</sup> U.S.-EU Mission Open Skies Press Release, *supra* note 15.

<sup>256</sup> *See id.*

<sup>257</sup> *Id.*

<sup>258</sup> Rahn, *supra* note 162 (noting the South Korean government's intent to cooperate with the non-EU opposition to the Proposed Directive, including United States, China, Japan, Russia, and Australia).

<sup>259</sup> *See* U.S.-EU Mission Open Skies Press Release, *supra* note 15.

<sup>260</sup> *See* discussion *supra* Part III.C.

<sup>261</sup> *See* U.S. Model Open Skies ASA, *supra* note 81, art. 13; Dempsey, *supra* note 57, at 243 (noting that although ASAs are nominally agreements between states, airlines may pressure their domestic government to enforce the agreement).

<sup>262</sup> *See* U.S. Model Open Skies ASA, *supra* note 81, art. 14.

<sup>263</sup> Jennison, *supra* note 215.

<sup>264</sup> *See* Turner, *USA Ready to Fight*, *supra* note 190, at 8.

the nature of a potential challenge to the regulation in front of the ICAO Council.<sup>265</sup> In the Hushkit Dispute, large financial stakes coupled with political and technical concerns informed and motivated a U.S. challenge under Article 84 against EU member-states to the implementation of environmental regulation.<sup>266</sup> U.S. aviation representatives have noted that implementation of the Proposed Directive may prompt a similar U.S. response before the ICAO Council to block the extension of the ETS to international aviation.<sup>267</sup> Further, where the Hushkit Dispute primarily concerned the United States and EU member-states, the Proposed Directive appears to have elicited broader international opposition to the regulation.<sup>268</sup>

The ICAO Council's acceptance of the Hushkit Dispute marked an expansion of the Council's exercise of jurisdiction into economic and environmental disputes.<sup>269</sup> It is reasonable to expect that the Council might continue to exert itself in these areas affecting international aviation and entertain challenges to the Proposed Directive.<sup>270</sup> The resolution of the Hushkit Dispute through assisted negotiation was consistent with the Council's demonstrated preference to settle disputes short of formal adjudication, but it left as an open question the relation between ICAO member-state environmental regulation and the Convention and ICAO standards.<sup>271</sup> If implemented, the Proposed Directive may afford the Council another opportunity to provide guidance on this matter.<sup>272</sup> Any future reconsideration of this question would depend, however, on how the developing ICAO guidance on emissions trading in international aviation would relate to the EU regulation.<sup>273</sup>

---

<sup>265</sup> See U.S.-EU Mission Open Skies Press Release, *supra* note 15.

<sup>266</sup> See Dempsey, *supra* note 57, at 277–79.

<sup>267</sup> U.S.-EU Mission Open Skies Press Release, *supra* note 15. The Press Release states:

Implementation of the proposal does promise a repeat, if it's approved by the Council and the European Parliament and placed into law in the EU, it promises a repeat of the bitter fight several years ago over the unilateral EU "hushkits" proposal, the EU "hushkits" regulation. It was, in fact, a regulation the EU was eventually forced to withdraw, to repeal after legal proceedings were brought against Member States under the Chicago Convention.

*Id.*

<sup>268</sup> Pilling & Thompson, *supra* note 14 and accompanying text.

<sup>269</sup> Dempsey, *supra* note 57, at 278.

<sup>270</sup> See *id.*

<sup>271</sup> *Id.* at 286.

<sup>272</sup> See *id.*

<sup>273</sup> See *Proposed Directive*, *supra* note 11, at 3 (noting that the EC will reconsider ICAO guidance on emissions trading after it has been updated at the Assembly's 2007 meeting).

#### IV. PURSUING INTERNATIONAL AVIATION EMISSIONS REDUCTION MEASURES THROUGH THE ICAO

The Proposed Directive embodies a progressive and timely regulatory intent to apply a novel regulatory mechanism to a specific manifestation of the climate change effects of a commercial activity, a problem that increasingly attracts global attention.<sup>274</sup> Non-EU political, technical, and legal opposition to the Proposed Directive largely flows from the idea that extension of the ETS to international aviation amounts to an ill-advised and possibly impermissible unilateral action directed toward a global problem that requires a multilateral solution.<sup>275</sup> Even in light of this critique, it is important to note that where multilateral action is desirable to address a global environmental problem, unilateral action often, in fact, provides the impetus that ultimately spurs global action.<sup>276</sup> The Proposed Directive is motivated in part by a reasonable impatience among EU member-states with the pace of the development of multilateral international aviation emissions reduction measures.<sup>277</sup> However, the formidable multidisciplinary concerns raised by the regulation counsel against extension of the ETS to international aviation.<sup>278</sup> To preserve the regulatory momentum at the heart of the Proposed Directive and insulate it from likely protracted legal challenges, the EC should not include international aviation in the ETS; rather, international aviation emissions reductions should be aggressively pursued through the ICAO because it is responsive to the political, technical, and legal implications raised by the regulation.<sup>279</sup>

The ICAO is the politically appropriate body to direct development of international aviation emissions reduction measures. The Chicago Convention charges the ICAO with the task of achieving uniformity in international aviation regulation.<sup>280</sup> The ICAO has expanded its role in environmental regulation from setting technical standards to contemplating complex, market-based measures that exist at the inter-

---

<sup>274</sup> FAA/EC Roundtable Press Release, *supra* note 165 (noting the urgency in the EU, as manifest in the ETS, to act on climate change).

<sup>275</sup> See U.S.-EU Mission Open Skies Press Release, *supra* note 15 and accompanying text.

<sup>276</sup> Robert F. Housman & Durwood J. Zaelke, *Making Trade and Environmental Policies Mutually Reinforcing: Forcing Competitive Sustainability*, 23 ENVTL. L. 545, 567 (1993).

<sup>277</sup> EC Communication on Reducing the Climate Change Impact of Aviation, *supra* note 13, at 5 (noting the difficulties of developing aviation emissions guidance through the ICAO and the subsequent need for EU action in a new direction).

<sup>278</sup> See discussion *supra* Part III.A-C.

<sup>279</sup> See discussion *supra* Part III.A-C.

<sup>280</sup> See Chicago Convention, *supra* note 22, arts. 37, 44.



face of economic, technical, and international policy.<sup>281</sup> Accordingly, the ICAO is the appropriate venue to work towards uniformity among member-states in such a complex regulatory arena.<sup>282</sup> Further, as nearly all countries with international aviation operators are members of the ICAO, developing emissions reduction measures through the ICAO would increase participation from all primary international aviation stakeholders.<sup>283</sup> ICAO-developed guidance should reduce the disenfranchisement and resentment that might follow from unilateral regional action with far-reaching effects, lessening the risk of noncompliance and retaliatory regulation that may otherwise follow.<sup>284</sup>

The ICAO is best positioned to guide the technical design of an international aviation emissions reduction regime.<sup>285</sup> As its regulatory role has expanded, the ICAO has developed unmatched multidisciplinary expertise through the solicitation of expert input in a number of fields affecting international aviation policy, including economics, engineering, and environmental science.<sup>286</sup> This expertise should lend itself to full consideration of the technical issues related to the design of an international aviation emissions reduction regime and increase stakeholder confidence in the resultant system.<sup>287</sup> Aviation representatives have criticized the impact assessment commissioned by the EC and relied upon in the Proposed Directive.<sup>288</sup> EU aviation interests have argued that the study did not adequately account for the economic effects of extending the ETS to aviation.<sup>289</sup> Non-EU interests have argued that the study gave insufficient consideration to the impacts of extending the ETS to international aviation felt outside of the EU.<sup>290</sup> With its geographically diverse membership, the ICAO is well suited to take into account the economic, political, and technical circumstances of its

---

<sup>281</sup> Maillett & Burleson, *supra* note 64, at 5.

<sup>282</sup> *See id.*

<sup>283</sup> *See* Int'l Civil Aviation Org., Contracting States, [http://www.icao.int/cgi/goto\\_m.pl?cgi/statesDB4.pl?en](http://www.icao.int/cgi/goto_m.pl?cgi/statesDB4.pl?en) (last visited Mar. 27, 2008).

<sup>284</sup> *See generally* Pilling & Thompson, *supra* note 14 (noting the disappointment of the AAPA that Asian aviation interests were not consulted regarding the Proposed Directive and that the AAPA was rebuffed after attempting to engage the EC regarding the regulation).

<sup>285</sup> *See* Miller, *supra* note 29, at 724–25 (noting that the ICAO's technical expertise makes it well-suited to develop international aviation emissions measures).

<sup>286</sup> Maillett & Burleson, *supra* note 64, at 5.

<sup>287</sup> *See id.*

<sup>288</sup> Aimee Turner, *Emissions Plan Faces Airline Flak*, FLIGHT INT'L, Feb. 13, 2007, available at 2007 WLNR 2921233 (noting EU criticism of the CE Report, upon which the EC relied in conducting an impact assessment to inform the Proposed Directive).

<sup>289</sup> *See id.*

<sup>290</sup> *See id.*

member-states in emissions reduction system design.<sup>291</sup> This robust consideration of a variety of regulatory philosophies and mechanisms should address the equity concerns raised by member-states in developing regions.<sup>292</sup> Lastly, development of an international aviation emissions reductions program through the ICAO may avoid the regulatory and market distortions that would likely follow from enactment of the Proposed Directive.<sup>293</sup> Achieving a broader geographic coverage in an emissions reduction regime, even if it were to mean settling on less ambitious emissions standards, could result in a more effective system that avoids regional balkanization of regulation and market distortions.<sup>294</sup>

Pursuing an international aviation emissions reduction regime through the ICAO could avoid legal challenges that appear likely if the Proposed Directive continues on its current path toward enactment.<sup>295</sup> The fundamental tension underlying much of the opposition to the Proposed Directive—that it is an ill-advised unilateral action aimed at a global problem with dramatic effects felt abroad—incentivizes potential opponents of the regulation to interpret questionable provisions of relevant law as presenting legal obstacles to the extension of the ETS to international aviation.<sup>296</sup> Non-EU aviation interests have indicated that legal action is likely if the regulation proceeds toward enactment.<sup>297</sup> As a result, the legal status of the Proposed Directive under the existing international aviation regulatory framework and international law is uncertain until these legal disputes are either averted or resolved.<sup>298</sup> Developing an international aviation emissions reduction system through the ICAO would allow adverse parties to work toward a common understanding of the meaning of contested provisions of the relevant law as they relate to aviation emissions reduction measures.<sup>299</sup>

Skeptics of pursuing international aviation emissions reductions through the ICAO may argue that the ICAO has failed to act quickly enough.<sup>300</sup> They might fear that aviation interests have used the ICAO

---

<sup>291</sup> See Miller, *supra* note 29, at 728–29.

<sup>292</sup> See *id.*

<sup>293</sup> See *id.* at 726.

<sup>294</sup> Jennison, *supra* note 215.

<sup>295</sup> See Turner, *USA Ready to Fight*, *supra* note 190, at 8.

<sup>296</sup> See Jennison, *supra* note 215.

<sup>297</sup> See Turner, *USA Ready to Fight*, *supra* note 190, at 8.

<sup>298</sup> See *id.*

<sup>299</sup> See Jennison, *supra* note 215.

<sup>300</sup> See EC Communication on Reducing the Climate Change Impact of Aviation, *supra* note 13, at 5.

to delay implementation of CO<sub>2</sub> emissions standards.<sup>301</sup> To be sure, the ICAO has contemplated emissions reduction measures for a number of years and has yet to issue emissions guidance that would achieve the reductions contemplated by the Proposed Directive.<sup>302</sup> However, the ICAO has worked diligently during this time through cooperation with member-state governments, multinational organizations, and in its own committees and working groups to develop the capability to account for the myriad concerns implicated in pursuing emissions reductions.<sup>303</sup> The EU could provide a needed spur to the development of ICAO emissions guidance by extending the ETS to aviation in the EU among its member-states, as contemplated by the first phase of the Proposed Directive, and bringing concrete evidence of the implementation of emissions trading in aviation to bear on the ICAO process.<sup>304</sup>

The ETS in general, and the Proposed Directive in particular, demonstrates that the EU is out in the forefront in pursuing CO<sub>2</sub> emissions reductions.<sup>305</sup> Rather than jeopardize the regulatory momentum underlying the Proposed Directive, the EU should instead channel this inertia into holding the ICAO accountable for fulfilling the environmental duties it has assumed through rigorous pursuit of an international aviation emissions regime. The recent ICAO CAEP meeting, Colloquium, and Assembly meeting show that emissions reduction measures—particularly emissions trading—figure prominently in the regulatory consciousness of the ICAO and its member-states.<sup>306</sup> Seizing upon this consciousness, and mindful of the ambitiousness of the Proposed Directive, the EU would stand poised to capitalize on a prime opportunity to ensure the institutional integrity and responsibility of the ICAO.

## CONCLUSION

The international civil aviation regulatory framework, comprised of the Chicago Convention, ICAO, and bilateral air service agreements,

---

<sup>301</sup> See FAA/EC Roundtable Press Release, *supra* note 165 (“The Europeans see ICAO as a recipe for delay and no action. That’s why they’re going ahead, instead of a working group to start a working group to start a working group, which would report in 2007 to create another working group. That’s really how they see it.” (quoting an unnamed member of the press)).

<sup>302</sup> See Miller, *supra* note 29, at 712–15 (detailing the advent of ICAO’s consideration of emissions mitigation measures).

<sup>303</sup> See *id.* at 724.

<sup>304</sup> See FAA/EC Roundtable Press Release, *supra* note 165.

<sup>305</sup> *Id.*

<sup>306</sup> See ICAO 2007 Assembly Meeting Climate Change Group Press Release, *supra* note 71.

reaches nearly all matters related to international aviation. Reflecting increasing global concern over environmental quality, the ICAO has expanded the ambit of its regulatory activities from providing guidance on technical matters and airspace rights to include the contemplation of complex international environmental regulation.

The EC's Proposed Directive would extend the ETS to civil aviation, first to airlines operating in the EU, and then to all international aviation operators serving the EU. The regulation would subject all airlines operating in the EU to CO<sub>2</sub> emissions caps and participation in the EU carbon market. EU representatives have argued that the Proposed Directive is congruent with international aviation emissions reduction efforts and is a consistent and necessary next step toward achieving meaningful emissions reductions.

Non-EU aviation interests have raised significant political, technical, and legal critiques of the Proposed Directive's inclusion of international aviation in the ETS. Opposition to the regulation principally flows from the perception that the EU is acting unilaterally to address a global problem. Critics have questioned whether the EC is the politically appropriate regulatory body to ensure maximum efficiency and compliance. They have also questioned several technical design aspects of the regulation's inclusion of international aviation in the ETS, including choice of regulatory instrument, emissions credit allocation, compliance and enforcement measures, and system coverage. These political and technical concerns may inform legal challenges under the Chicago Convention, bilateral air service agreements, or general provisions of international law to block the implementation of the Proposed Directive.

To preserve the regulatory inertia at the center of the Proposed Directive and avoid undue legal challenges, the EC should not include international aviation in the ETS, but should instead rigorously pursue international aviation emissions reductions through the ICAO. The ICAO is responsive to the political, technical, and legal issues raised by the Proposed Directive and is the appropriate forum for international aviation stakeholders to discern the characteristics of an appropriate and effective international aviation emissions reductions regime. EU interests might be reasonably impatient with the pace of emission reductions measures in the ICAO to date. However, these interests should channel their efforts toward holding the ICAO to the environmental responsibilities it has voluntarily accepted rather than fending off likely challenges that would result from unilateral action.