

STUDENT PAPER

Clear skies or turbulence ahead? The international civil aviation organization's obligation to mitigate climate change

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The International Civil Aviation Organization (ICAO) set a cap for international aviation's greenhouse gas (GHG) emissions at its 2020 level and established a market-based mechanism to help achieve that cap. Against that backdrop, this article identifies ICAO's legal obligation to mitigate climate change by examining the international climate change treaties, ICAO's constituent treaty, the Chicago Convention, and ICAO's organizational practice. It finds that because ICAO is not a party to the climate change treaties and has a high degree of institutional autonomy, those treaties do not directly impose an obligation on ICAO. Although the Chicago Convention does not expressly mention the environment or climate change, ICAO's member states interpreted the Convention and enlarged ICAO's mandate under it to include the reduction or limitation of GHG emissions from international aviation so as to prevent dangerous climate change. This article finds that pursuant to Jan Klabbers' recently developed theory of role responsibility, ICAO arguably has an obligation to carry out this important mandate, and its failure to do so, or failure to do so effectively, could constitute an internationally wrongful omission.

Keywords: aviation; climate change law; environmental law; international organizations; international responsibility

1 Introduction

Climate change will likely result in massive ecological damage, and have tragic consequences for vulnerable populations around the world, including famine, disease, and war.¹ It is caused by the emission of greenhouse gases (GHG's) that are the dominant source of power for industry, buildings, and transportation—including aviation.² In 1944, a group of nations adopted the Chicago Convention, which serves as the 'constitutional framework for international air transport,' and thereby created the International Civil Aviation Organization (ICAO).³ ICAO became a specialized agency of the United Nations in 1947, and now has nearly universal membership. It is a powerful quasi-legislative organization that sets international standards for aircraft safety, crew certification, communications, navigation, and environmental standards for aircraft design and operation.⁴ Consistent with its mission and supported by a staff with a high degree of technical expertise, ICAO has enabled exponential growth of international air transport and air travel.⁵

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¹ *Special Report – Global Warming at 1.5 Degrees C*, Intergovernmental Panel on Climate Change, Summary for Policy Makers, 11, <<https://www.ipcc.ch/sr15/>>; K. Mach et al. 'Climate Change as a Risk Factor for Armed Conflict,' (2019) *Nature: an International Journal of Science*, 1.

² IPCC Special Report, note 1, at 2. Included within GHG's is carbon dioxide, which has the chemical formula CO₂. For ease of reference and unless otherwise noted, this article uses the terms carbon and GHG's interchangeably because GHG's other than carbon dioxide are often measured in terms of carbon dioxide equivalent. *Ibid.*

³ A. Piera, 'Greenhouse Gas Emissions from International Aviation: Legal and Policy Challenges' (2015), 86.

⁴ *ibid.*, 86–92.

⁵ *ibid.*, 86 n. 5.

Civil aviation has resulted in approximately two percent of net global GHG emissions. But aviation is the most carbon intensive form of transportation, and GHG emissions from international aviation are predicted to more than double between 2017 and 2030.⁶ Aviation also causes potentially significant 'non-CO₂ climate impacts' from contrails, radiative forcing, and the emission of other pollutants at high altitudes.⁷

Although states are required to reduce emissions from domestic aviation under the international climate change regime—the United Nations Framework Convention on Climate Change (UNFCCC), the Kyoto Protocol, and the Paris Agreement—international aviation was excluded from national commitments because it is difficult to allocate which state should be responsible for international trips where most emissions occur over the high seas.⁸

Instead of assigning responsibility to states, or reaching an agreement within the climate change treaty framework, the international community had an understanding—and in the case of the Kyoto Protocol's Article 2(2) made an explicit statement—that ICAO would handle GHG emissions from international aviation.⁹ Yet, ICAO itself is not a party to the climate change treaties, and it was not until 2010 that ICAO set an 'aspirational goal' for international aviation's emissions growth to be carbon neutral after 2020. ICAO's action was in response to the European Union (EU)'s effort to unilaterally and more stringently regulate international aviation's GHG emissions.¹⁰ As the EU held off with its plans, in 2016, ICAO implemented several policies to meet its post-2020 goal, including a market-based measure (MBM) known as the Carbon Offset Reduction Scheme for International Aviation (CORSIA).¹¹ CORSIA will require airline operators to purchase carbon offsets that will allow operators to continue polluting while paying for projects that theoretically reduce GHG emissions. ICAO will certify carbon-offset programs as eligible for use in CORSIA. CORSIA is scheduled to go into effect on a pilot basis in 2021; and will be fully implemented in 2024.¹²

Against that backdrop, this article determines whether international law requires ICAO to mitigate climate change caused by international aviation, and it identifies the source and nature of that obligation. Rather than attempt to map out all ICAO's climate obligations related to its level of ambition for reductions and its climate policies, this article focuses on the fundamental question of whether ICAO has an obligation to address the climate crisis by regulating GHG emissions from aviation, and where that obligation comes from. Specifically, it asks if ICAO is obliged to mitigate the climate impacts of international aviation based on its constituent treaty, the Chicago Convention, or the climate treaties, and whether it's more legally defensible to situate its obligation within the aviation or climate regimes.¹³

To answer that question, this article draws on the International Law Commission's Draft Articles on the Responsibility of International Organizations, and scholarship and commentary on those articles and

⁶ United Nations Environment Program, *2017 Emissions Gap Report* (DEW/2136/PA) 18–19. As of the publication of this article, the novel coronavirus pandemic has largely eliminated the international air travel market. (B. Pierce 'CoVid 19 Updated Impact Assessment,' International Air Transport Association, March 24, 2020) <iata.org> Yet, China's domestic aviation market is rebounding, and other pandemics have not interrupted international aviation's long-term growth. (*Id.*)

⁷ D.S. Lee, et. al. 'Transport Impacts on Atmosphere and Climate: Aviation,' (2010) 44 *Atmospheric Environment*, 4680 (discussing aviation's non-carbon radiative forcing caused by high altitude water vapour and NO₂ emissions). <<https://doi.org/10.1016/j.atmosenv.2009.06.005>>.

⁸ Piera, note 3, 42–43; B. Romera & H. Van Asselt, 'The International Regulation of Aviation Emissions: Putting Differential Treatment into Practice,' (2015) 27 *Journal of Environmental Law*, 262. <[10.1093/jel/eqv006](https://doi.org/10.1093/jel/eqv006)>.

⁹ Kyoto Protocol to the United Nations Framework Convention on Climate Change, Dec. 10, 1997, U.N. Doc FCCC/CP/1997/7/Add.1, 37 *International Legal Materials* 22 (1998), Art. 2(2).

¹⁰ ICAO Assembly Resolutions In Force (as of 8 October 2010), Doc. 9958, Resolution 37–19; see Section 3.3.

¹¹ ICAO Assembly Resolutions In Force (as of 4 October 2013), Doc. 10022, Resolution 38–18 (hereinafter ICAO Assembly Resolution 38–18); International Civil Aviation Organization (ICAO), Convention on International Civil Aviation, 7 December 1944, (1994) 15 *United Nations Treaty Series* 295; *ibid.*, Annex 16, Volume 4 (hereinafter CORSIA SARP).

¹² ICAO Assembly Resolutions in Force (as of 4 October 2019), Doc. 10140, Resolution 40–19.

¹³ See B. Romera, *Regime Interaction and Climate Change* (2018) (discussing generally 'regime interaction' in context of aviation and climate change); Piera, note 3, 41 (examining fragmentation of international law in aviation and climate). Although the Montreal Protocol is properly considered part of international climate change law, an analysis of its interaction with aviation is beyond the scope of this article. Any obligation of ICAO to mitigate climate change under customary international law is likewise not analysed here.

international institutional law.¹⁴ This article is grounded in treaty interpretation, and thus uses international law's traditional source-based approach.¹⁵

This article first describes ICAO's structure and legal personality. It then examines whether ICAO has a 'mandate' to regulate GHG emissions, defining mandate as a general or main function, as opposed to a discretionary 'power.'¹⁶ That inquiry is based on ICAO's interpretation of the Chicago Convention, its 'established practice' related to climate regulation, and ICAO's members 'subsequent practice' of applying the Chicago Convention to give ICAO a mandate to regulate GHG emissions from international aviation.¹⁷ The article next examines whether the climate change treaties impose legal obligations directly on ICAO according to various theories that bind international organizations to their members' legal obligations. In its final section, the article looks at whether ICAO's mandate encompasses an obligation to act.¹⁸

2 What is ICAO?

Assessing ICAO's legal obligation to mitigate climate change requires understanding what ICAO is. This section therefore provides an overview of ICAO's legal personality, and the powers and functions in which its obligations are situated.

2.1 The Chicago Convention

Designed to ensure the 'safe and orderly' development of international civil aviation, the Chicago Convention sets forth comprehensive rules for air travel and cargo, including the sovereignty of states over their airspace, 'rules of the air' relating to the operation of aircraft within national airspace and over the high seas, a regime for nationality of aircraft, customs, accident protocols, and other matters.¹⁹ With 193 current state parties, the Convention is one of the most widely ratified treaties.²⁰ And measured by the expansion of international civil aviation, ICAO has been incredibly successful: aviation has grown exponentially since 1947 and is an integral part of the global economy, accounting for 3.6 percent of global gross domestic product and carrying billions of passengers each year.²¹

2.2 ICAO's legal personality

Article 37 of the Chicago Convention obliges states 'to collaborate in securing the highest practicable degree of uniformity in regulations, standards, procedures, and organization in relation to aircraft,' and to that end established ICAO to set such regulations and standards.²² The Convention provides in its Article 64 that ICAO

¹⁴ International Law Commission, 'Draft Articles on the Responsibility of International Organizations,' *Yearbook of the International Law Commission* (2011), vol. II, Part Two (hereinafter ILC DARIO Articles). The ILC DARIO Articles do not have the authority of customary international law, but instead represent part of international law's 'progressive development.' (Report of the International Law Commission on the Work of Its Sixty-third Session, *General Assembly Official Records*, Sixty-sixth Session, supp. no. 10 (a/66/10 and add. 1) (hereinafter ILC DARIO General Commentary) 53, para. 70.)

¹⁵ See J. D'Aspremont, *Formalism and the Sources of International Law: A Theory of the Ascertainment of Legal Rules* (2011). International law distinguishes between rules of law that impose 'obligations,' and rules that govern the consequences for breaching them, which are rules of 'responsibility.' (See ILC DARIO General Commentary, note 14, para. 3.) The former are known as primary rules, while the latter are secondary rules. (Ibid.) Rules of international organizations—the 'constituent instruments, relevant decisions and resolutions, and established practice' of an organization—can constitute substantive obligations or rules of responsibility depending on the rule and its context. (Vienna Convention on the Law of Treaties between States and International Organizations or Between International Organizations, 12 March 1986 (hereinafter VCLT (1986)), Article 2(j); E. Racounas, 'Practice as a Relevant Factor for the Responsibility of International Organizations,' in I. Brownlie & M. Ragazzi, eds., *Responsibility of International Organizations: Essays in Memory of Sir Ian Brownlie*, (2013) 164.) The Chicago Convention is both an international treaty and part of ICAO's 'rules.' (ILC DARIO Articles, note 14, Article 2(b); see C. Ahlborn, 'The Rules of International Organizations and the Law of International Responsibility,' (2011) 8 *International Organizations Law Review* 403. <10.1163/157237411X634970>.

¹⁶ J. Klabbbers, 'Reflections on Role Responsibility: The Responsibility of International Organizations for Failing to Act,' (2017) 28(4) *European Journal of International Law*, 1137. This article's definition of mandate comes from Jan Klabbbers' recently developed theory of role responsibility, which posits that an organization's mandate can also entail a legal obligation to act. *Ibid.*

¹⁷ As discussed in Section 3, this interpretative approach is based on international jurisprudence and the VCLT (1986).

¹⁸ See Section 4.

¹⁹ Chicago Convention, note 11, Preamble; Convention Arts. 12, 17, 23–24, 26.

²⁰ International Civil Aviation Organization, Status of Chicago Convention, <https://www.icao.int/secretariat/legal/List%20of%20Parties/Chicago_EN.pdf>.

²¹ International Air Transport Association, Value of Aviation, <<https://www.iata.org/policy/promoting-aviation/Pages/index.aspx>> accessed 17 July 2019).

²² Chicago Convention, note 11, Art. 37; Piera, note 3, 86 n. 5.

could enter into arrangements with 'any general organization set up by the nations of the world to preserve peace.'²³ ICAO became a specialized United Nations agency in 1947.²⁴

ICAO is an international organization and is therefore a subject of international law. An 'international organization' is 'an organization established by a treaty or other instrument governed by international law and possessing its own international legal personality.'²⁵ International organizations that have legal personality are 'endowed with a certain autonomy.'²⁶

Article 47 of the Convention, entitled 'Legal Capacity,' provides that the ICAO 'shall enjoy in the territory of each contracting state such legal personality as is necessary for the performance of its functions.' ICAO's headquarters agreement with the government of Canada provides that the ICAO, its property, and assets are immune from judicial processes.²⁷ Its premises are inviolable and are entitled to the same protection from the Government of Canada as diplomatic missions.²⁸ Therefore ICAO—a creature of the Convention and recognized by the United Nations as one of its specialized agencies—is an international organization under international law. As discussed in Section Four, ICAO's legal personality is relevant to the questions posed in this article because under international law, international organizations with legal personality can bear international legal obligations.²⁹

2.3 ICAO's structure, objectives, and powers

ICAO has two governing bodies. ICAO describes its Assembly of State Parties (ICAO Assembly or Assembly) as its 'sovereign body.'³⁰ The ICAO Assembly has general responsibility for the matters in the Chicago Convention, but can refer any matter to the Council (ICAO Council or Council), or consider any matter referred by the Council to the Assembly.³¹ The Council 'is a permanent body responsible to the assembly,' composed of 39 states elected by the Assembly.³² Because the Assembly meets only every three years for two weeks and faces a backlog of working papers at those meetings, commentators view the Assembly's power as having eroded, while the Council's has strengthened.³³

The Convention vests the Council with quasi-legislative authority to set 'standards and recommended practices and procedures' (standard or SARP) for a variety of technical issues, including communication and navigation systems and the airworthiness of aircraft.³⁴ These standards are designated 'for convenience' as Annexes to the Convention, and are adopted by two-thirds votes at ICAO Council meetings.³⁵ The Council has resolved that states should adopt the precise language of the standards 'so far as practicable,' and drafts its Annexes to 'facilitate incorporation, without major textual changes, into national legislation.'³⁶ There are currently 19 Annexes to the Convention; Annex 16 on Environmental Protection includes CORSIA as its fourth volume.³⁷

There is debate about the extent to which SARPs function as hard law or soft law in national airspace.³⁸ The Convention presumes that SARPs will be incorporated into national law unless states register differences between its national legislation and a SARP by giving 'immediate notification' to the ICAO, and the ICAO

²³ Chicago Convention, note 11, Art. 64.

²⁴ International Civil Aviation Organization Resolutions Adopted by the First Assembly (March 1947), Doc. A1-P45, Resolution A1-2.

²⁵ ILC DARIO Articles, note 14, Article 2(a).

²⁶ *Legality of the Threat or Use of Nuclear Weapons*, Advisory Opinion, I.C.J. Reports 1996, 226 (hereinafter *Use of Nuclear Weapons*), para. 66. The relation of the autonomy of international organizations to this article's research question is addressed in Section 4.

²⁷ R. Abeyratne, *Regulation of Commercial Space Transport: Astrocizing of ICAO* (2015) (SpringerBriefs in Law) 118. <10.1007/978-3-319-12925-9>.

²⁸ *ibid.*, p. 119.

²⁹ ILC DARIO Articles, note 14, Articles 3; 28.

³⁰ International Civil Aviation Organization, 'About the ICAO Assembly,' <<https://www.icao.int/Meetings/A40>> accessed 27 Feb. 2020. ICAO's description of its Assembly does not appear to have any legal effect, as it does not elaborate on its claim that an organ of an international organization can be sovereign.

³¹ Chicago Convention, note 11, Art. 48.

³² *ibid.*, Art. 50, Piera, note 3, 90.

³³ Piera, note 3, 92.

³⁴ Chicago Convention, note 11, Art. 50.

³⁵ *ibid.*, Art. 54; 56(l); 90. SARPs are not technically part of the Convention, as they are not amendments to it. (P. Dempsey, 'Compliance & Enforcement in International Law: Achieving Global Uniformity in Aviation Safety,' (2004) 30 North Carolina Journal of International Law and Comparative Regulation 13 n. 49 (discussing amendment procedure for Chicago Convention), <<https://scholarship.law.unc.edu/ncilj/vol30/iss1/1>>.

³⁶ Chicago Convention, note 11, Annex 1.

³⁷ CORSIA SARP, note 11.

³⁸ Dempsey, note 35, 13.

must then notify all other states of 'the difference that exists between international standards and the corresponding national practice of the state.'³⁹ For the vast majority of the Earth's surface that constitutes the high seas, SARPs function as hard law: the Convention expressly provides that 'over the high seas the rules in force shall be those established under this Convention.'⁴⁰

The structure of the Chicago Convention and state practice illustrates that ICAO has broad authority over aircraft design and aviation in national airspace.⁴¹ Using SARPs and other regulatory tools, ICAO functions as a 'top-down' organization that sets global rules for the airline industry's safety and security.⁴² And, there are significant penalties for a state's failure to follow SARPs, particularly those related to safety: foreign governments may refuse to recognize the certificates and licenses of aircraft, crew, or airports not in compliance with a SARP; and private insurance may become impossible to attain.⁴³

The Convention does not state that environmental protection is an ICAO objective.⁴⁴ But, ICAO has a long history of regulating aviation's environmental impacts, particularly the mitigation of aircraft noise and related land development policies.⁴⁵ As discussed in more detail below, there is a debate about whether ICAO's steadily growing role as an environmental regulator is consistent with its purpose under the Convention of promoting the aviation's development.⁴⁶

The ICAO Council's Committee on International Aviation Environmental Protection (CAEP), formulates 'recommendations on issues involving technical, economic, social, and policy aspects of aviation and the environment.' CAEP works in three-year cycles on specific environmental issues that result in recommendations to the Council.⁴⁷

3 The source and nature of ICAO's mandate to regulate GHG emissions from international aviation

Before turning to a discussion of ICAO's obligation to mitigate climate change, this article maps the source and nature of ICAO's mandate to do so. That ICAO has a mandate to act may seem uncontroversial because it has already established a level of ambition for reductions and is implementing CORSIA. And scholars have noted that ICAO has an 'implicit' climate change mandate from the Kyoto Protocol, and granted itself a mandate to act based with its climate resolutions.⁴⁸ This article uses a broader definition of 'mandate' than a legal justification, and instead looks to whether ICAO has a 'general (or main) function' of regulating GHG emissions from aviation.⁴⁹ In so doing, it analyses the legal source of ICAO's climate policies using a methodology based on international courts' approach to interpreting organizations' constituent instruments.

3.1 The legal standard for determining an international organization's mandate

Although international organizations can be subjects of international law, unlike sovereign states, their legal rights and duties are limited by their 'purposes and functions as specified or implied in its constituent documents and developed in practice.'⁵⁰ A 'constituent document' is the constitution of an international organization, and is most often a multilateral treaty that creates the organization.⁵¹ To interpret whether

³⁹ Chicago Convention, note 11, Art. 38.

⁴⁰ *ibid.*, Art. 12; Dempsey, note 35, 18–19.

⁴¹ Dempsey, note 35, 13.

⁴² C. Lyle, 'Beyond the ICAO's CORSIA: Towards a More Climatically Effective Strategy for Mitigation of Civil-Aviation Emissions' (2018) 8 *Climate Law* (hereinafter Lyle), 3. <10.1163/18786561-00801004>.

⁴³ Dempsey, note 35, 18.

⁴⁴ Chicago Convention, note 11, Art. 44(d).

⁴⁵ See Piera, note 3, 95.

⁴⁶ *ibid.*, 87–89; 97 (discussing why aviation's environmental problems, including climate change, have been viewed as a European problem); Section 3.

⁴⁷ *ibid.*, 95.

⁴⁸ Piera, note 3, 45; Romera, note 13, 148.

⁴⁹ Klabbers, note 16, 1137. That definition is used because this article is concerned with whether ICAO has an *obligation* to act, not merely the legal right to do so.

⁵⁰ *Reparation for Injuries Suffered in the Service of the United Nations*, Advisory Opinion: I.C.J. Reports 1949, 180. Although non-binding, International Court of Justice (ICJ or Court) opinions interpreting international organizations' constituent documents demonstrate the Court's interpretative approach and provide 'general observations that transcend specific individual advisory opinions.' (N. Blokker, 'Constituent Instruments,' in J. K. Cogan, et al., eds. *The Oxford Handbook of International* (2016) at 943–962, 957. <10.1093/law/9780199672202.003.0044>.

⁵¹ Blokker, note 50, 944; Abeyratne, note 27, 116.

a constituent instrument grants certain legal rights or functions to an international organization, international courts first examine a treaties' text, and the organization's interpretation of it, which is regarded as persuasive.⁵² They then use a 'recourse to practice' approach.⁵³ The 'practice' that is examined can be the organization's 'established practice' under its constituent instrument, which forms part of its internal rules and a type of customary law, or the 'subsequent practice' of state parties to an organization according to which the constituent instrument is interpreted similar to a contract.⁵⁴

There are different tests for establishing the types of organizational practice. Established practice does not require state parties' agreement, and can be shown through an organization's 'body of practice' formed 'after a number of years' that is an 'integral part' of the organization's rules and is neither 'disputed nor uncertain.'⁵⁵ Formal acts by an organization's organs are the most important and persuasive source for showing established practice.⁵⁶ If such acts are made by through a plenary organ such as an assembly or conference of state parties, they can also constitute subsequent practice interpreting a treaty.⁵⁷ Subsequent practice generally 'demands the agreement of *all the parties* in order to make practice relevant for treaty interpretation.'⁵⁸ Both established practice and subsequent practice can demonstrate the functions and purposes of an international organization under their constituent instrument, and therefore are relevant to illuminating its mandate, or main function.⁵⁹

To assess ICAO's mandate to regulate GHG emissions, this section reviews ICAO Assembly resolutions for the following purposes: as representing ICAO's interpretation of the Chicago Convention; for evidence of ICAO's established practice; and as proof of ICAO's members subsequent practice of agreeing as to the meaning of the Chicago Convention.

3.2 ICAO's interpretation of the Chicago Convention and climate treaties on its mandate to regulate GHG emissions

This section analyses the text of the Chicago Convention and discusses how ICAO interprets it and the climate treaties as giving it a mandate to regulate GHG emissions from international aviation.

ICAO's constituent document is the Chicago Convention, which states in its Article 44 that ICAO should 'develop the principles and techniques of international air navigation and ... foster the planning and development of international air transport so as to ... meet the needs of the peoples of the world for safe, regular, efficient and economical air transport,' and which provides in its preamble that 'the future development of international civil aviation can greatly help to create and preserve friendship and understanding among the nations and peoples of the world, yet its abuse can become a threat to the general security.'⁶⁰

ICAO has interpreted the Chicago Convention's broad provisions as requiring it to achieve 'maximum compatibility between the safe and orderly development of civil aviation and the quality of the environment.'⁶¹ Arguably, ICAO's consideration of the quality of the environment is supported by the treaty's text, as environmentally harmful aviation—including aviation that causes climate change—could threaten aviation's

⁵² *Certain Expenses of the United Nations (Article 17, paragraph 2, of the Charter)*, Advisory Opinion of 20 July 1962: I.C.J. Reports 1962, 151, para. 168.

⁵³ There is a 'massive amount' of judicial support for the practice of organizations. (Racounas, *supra* note 15, 167–169 (discussing ICJ decisions and awards of administrative and arbitral tribunals); Blokker, note 50, 957–958; C. Peters, 'Subsequent Practice and Established Practice of International Organizations: Two Sides of the Same Coin?', (2011) 3(2) *Goettingen Journal of International Law*, 619. <10.3249/1868-1581-3-2-peters>.

⁵⁴ Compare Vienna Convention on the Law of Treaties, 23 May 1969, *United Nations Treaty Series*, vol. 1155, 331 (hereinafter VCLT (1969)), Art. 5 and *Legal Consequences for States of the Continued Presence of South Africa in Namibia (South West Africa) notwithstanding Security Council Resolution 276 (1970)*, Advisory Opinion, I.C.J. Reports 1971, 16. (examining United Nations Security Council's practice in order to interpret United Nations Charter) with VCLT (1969), Art. 31(3)(b) and *Use of Nuclear Weapons*, note 26, (interpreting states' practice of determining functions of World Health Organization). See also Peters, note 53, 633.

⁵⁵ International Law Commission, 'Draft articles on the law of treaties between states and international organizations or between international organizations with commentaries' *Yearbook of the International Law Commission* (1982), Vol. II (Part 2) (hereinafter ILC Commentary on VCLT (1986)), 21, para. 25; see also Blokker, *supra*, note 50, 959–960.

⁵⁶ Ahlborn, note 15, 425.

⁵⁷ Peters, note 53, 630; *Id.*, 427.

⁵⁸ Peters, note 53, 619 (emphasis in original).

⁵⁹ Blokker, note 50, 959–960; Peters, note 53, 642.

⁶⁰ Chicago Convention, note 11, Art. 44.

⁶¹ International Civil Aviation Organization, Assembly Resolutions in Force (as of 5 October 2001), Doc. 9790, Resolution A33–7, Appendix A.

development and would be not be 'safe.' Moreover, there is increasing awareness of the security risk posed by climate change, and the development of aviation in a way that threatens 'the general security' would therefore be inconsistent with the Convention.⁶² Consequently, ICAO's interpretation of the Convention as bringing the regulation of international aviation's GHG emissions within its function and purpose appears to be correct, or at least plausible. In addition, ICAO's use of the word 'maximum' indicates that environmental concerns are a central function of the organization alongside aviation's development, not merely a discretionary power.

Alejandro Piera disagrees. He argues that the Chicago Convention's lack of reference to the environment or climate change is problematic and suggests the Convention should be amended.⁶³ He reasons that environmental initiatives could conflict with the 'overarching goals' of the Convention, such as promoting the sector's 'development (i.e. growth).'⁶⁴ Similarly, Beatriz Martinez Romera claims that the 'legal status of [ICAO's] environmental objective is certainly beneath the ones established by the Chicago Convention, since those are, at most, soft law, while the Chicago Convention is hard law.'⁶⁵ But, Article 44 of the Convention, read with reference to the Convention's preamble, can reasonably be interpreted as requiring that the 'growth' which ICAO is to promote is to be 'safe and orderly,' and avoid any threat to the 'general security.'⁶⁶ Thus, as Ruwissa Abeyratne writes, ICAO's liberal interpretation of Article 44 'deftly' obviated the need for amendment of the Chicago Convention.⁶⁷ And, consistent with international jurisprudence, ICAO's interpretation of its constituent instrument as giving it a mandate to regulate aviation's environmental impacts should be considered 'persuasive.'⁶⁸ Moreover, as discussed below, ICAO's member states' 'subsequent practice' of applying the Convention to include the regulation of aviation's environmental impacts supports a broader interpretation of Article 44 than Piera and Romera suggest.⁶⁹

ICAO's interpretation of the Chicago Convention as giving it an environmental mandate is reinforced by the international community's assignment of the management of the regulation of GHG emissions from international aviation to ICAO through the international climate treaties. Adopted in 1992 and in force in 1994, the UNFCCC is the umbrella treaty for addressing climate change. Its objective is achieving stabilization of atmospheric GHG's in order to prevent dangerous changes to the climate.⁷⁰ Among other things, the UNFCCC requires states to report inventories of their national GHG emissions to the UNFCCC Conference of Parties (COP).⁷¹ Not long after the UNFCCC came into force, difficulties with how to count emissions and allocate responsibilities for international aviation emerged.⁷² Under the UNFCCC, emissions from domestic aviation 'are reported by Parties in their inventories under national totals and are subject to national limitation and reduction commitments.' But emissions from international aviation are reported separately, 'calculated on the basis of the country where [aviation] fuel is sold. Crucially, however, this reporting does not equate with assigning responsibility for the associated emissions.'⁷³ The UNFCCC thus excluded international aviation emissions from any limitation and reduction commitments. Recognizing that the UNFCCC so acted, the ICAO Assembly 'decided to entrust CAEP with a very broad mandate to expand its work plan to include climate change issues associated with aviation and to work closely with other organizations such as the UNFCCC and the IPCC.'⁷⁴

The Kyoto Protocol, developed at the third UNFCCC COP, expressly addressed ICAO's role by stating that the '[p]arties included in Annex I shall pursue limitation or reduction of emissions of greenhouse gases

⁶² See 'Germany Pushes Climate Change as Security Risk,' Deutsche Welle 4 June 2019 <<https://www.dw.com/en/germany-pushes-climate-change-as-security-risk/a-49056370>> accessed 27 Feb. 2020.

⁶³ Piera, note 3, 116–117.

⁶⁴ *ibid.*

⁶⁵ Romera, note 13, 184.

⁶⁶ VCLT (1969), note 54, Art. 31(1) and 31(2) (treaties terms are interpreted with reference to their context, which includes the treaty's preamble; a treaty's preamble is evidence of its object and purpose); see also M. Hulme, 'Preambles in Treaty Interpretation,' (2016) 5(164) *University of Pennsylvania Law Review*, 1300.

⁶⁷ R. Abeyratne 'International Convention on Civil Aviation: A Commentary' (Springer 2014), 516.

⁶⁸ *Certain Expenses*, note 52, para. 168.

⁶⁹ VCLT (1969), note 54, Art. 31(3)(a) (subsequent practice relevant context for treaty interpretation).

⁷⁰ United Nations Framework Convention on Climate Change, 9 May 1992, S. Treaty Doc No. 102–38, 1771 U.N.T.S. 107 (hereinafter UNFCCC), Art. 2.

⁷¹ *ibid.*, Art. 4(1)(a).

⁷² Romera, note 8, 262.

⁷³ *ibid.*

⁷⁴ Piera, note 3, 95.

not controlled by the Montreal Protocol from aviation ... bunker fuels, working through the International Civil Aviation Organization.⁷⁵ The legal meaning of this term is disputed and has never been judicially determined.⁷⁶

Soon after the Kyoto Protocol was adopted, the ICAO Assembly issued a resolution on ICAO's mitigation of climate change. It cited Article 44 of the Chicago Convention and its 'responsibility to achieve maximum compatibility' between environmental protection and aviation's development, and ordered the Council and its CAEP to study options for limiting or reducing GHG emissions from international aviation, 'taking into account the requirements of the Kyoto Protocol.'⁷⁷ ICAO thus interpreted its constituent instrument together with the Kyoto Protocol as giving it a mandate, or core function, of mitigating climate change, and by resolving to achieve 'maximum compatibility,' placed environmental protection and aviation's development on equal legal footing.⁷⁸ And, in the preambles of numerous resolutions, the ICAO Assembly referred to the UNFCCC's Article 2 objective of preventing dangerous change to the climate when establishing its goal of carbon-neutral growth after 2020.⁷⁹ ICAO itself thereby interpreted Article 2(2) of the Kyoto Protocol and the UNFCCC's objective as linked to its mandate to regulate GHG emissions under Article 44.

Unlike the Kyoto Protocol, the 2015 Paris Agreement does not mention ICAO.⁸⁰ That Agreement was concluded after the ICAO Assembly adopted the principles and parameters for CORSIA in 2013.⁸¹ ICAO participated in the UNFCCC's COP that agreed on the Paris Agreement, and the Paris Agreement COP invited ICAO to continue to report progress on its environmental work program—which includes CORSIA—to the UNFCCC's Subsidiary Body for Scientific and Technological Advice.⁸² It can be inferred from this that the international community wanted responsibility for the regulation of GHG emissions from international aviation to remain with ICAO. And, ICAO maintains that under the Paris Agreement, international aviation emissions are 'regulated on a sectoral basis through ICAO.'⁸³ ICAO thus views the Chicago Convention and the climate change treaties as giving it a mandate to reduce or limit GHG emissions from international aviation in order to avoid dangerous changes to the climate.

Romera argues that ICAO's climate resolutions should be interpreted to mean that UNFCCC's climate reduction objective is 'subordinated' to ICAO's main goal of fostering aviation's growth because the reference to the UNFCCC is included in the resolutions' preambles.⁸⁴ This author respectfully disagrees. The resolutions' preambles are arguably part of their text rather than subordinate to it.⁸⁵ Moreover, international jurisprudence indicates that the preambles of international organizations' resolutions can be referenced to understand resolutions' object and purpose.⁸⁶ ICAO's resolutions' reference to the UNFCCC objective therefore demonstrates that the object and purpose of ICAO's climate policy is the prevention of dangerous climate change.

⁷⁵ Kyoto Protocol, note 9, Art. 2(2). Both the UNFCCC and the Kyoto Protocol divide states into groups. (UNFCCC, note 70, Art. 4(2); Kyoto Protocol, note 9, Art. 2–5.) Only Annex I developed states have obligations to meet quantified GHG emissions reductions. (Ibid.)

⁷⁶ Piera views ICAO's actions on climate change and interprets them together with Article 2(2) of the Kyoto Protocol as giving ICAO an 'implicit mandate' to regulate GHG emissions from international aviation, while Lyle sees the Protocol as 'referring' civil aviation to the ICAO. (Piera, note 3, 45; Lyle, note 42, 9.)

⁷⁷ International Civil Aviation Organization, Resolutions Adopted at the 32nd Assembly, Provisional Edition, <<https://www.icao.int/Meetings/AMC/MA/Assembly%2032nd%20Session/resolutions.pdf>> Resolution, A32–8, Appendices A and F.

⁷⁸ Klabbers, note 16, 1156 (defining an organization's 'mandate').

⁷⁹ ICAO Assembly Resolution 37–19, note 10; ICAO Assembly Resolution 38–18, note 11.

⁸⁰ See Paris Agreement, 4 November 2016, United Nations Registration No. 54113 (hereinafter Paris Agreement).

⁸¹ ICAO Assembly Resolution 38–18, note 11.

⁸² United Nations Framework Convention on Climate Change, 'Report of the Conference of the Parties on its twenty-first session, held in Paris from 30 November to 13 December 2015,' United Nations Doc. FCCC/CP/2015/10 (showing ICAO was a participant at COP 21).

⁸³ International Civil Aviation Organization, 'Top Three Misconceptions about CORSIA,' <https://www.icao.int/environmental-protection/Pages/A39_CORSIA_FAQ6.aspx> accessed 17 July 2019).

⁸⁴ Romera, note 13, 184 (discussing ICAO climate resolutions' integration of UNFCCC objective).

⁸⁵ VCLT (1969), note 54, Art. 31(1). The ICJ describes the VCLT (1969) as providing 'guidance' for the interpretation of international organizations' resolutions. (*Accordance with International Law of the Unilateral Declaration of Independence in Respect of Kosovo, Advisory Opinion* [2010] ICJ Rep 403 (hereafter 'Kosovo Opinion'), at 442, para. 94.)

⁸⁶ VCLT (1969), note 54, Art. 32(2); see Kosovo Opinion, note 85, para. 98 (interpreting Security Council Resolution's preambular language to ascertain object and purpose); but see M. Wood, 'The Interpretation of Security Council Resolutions, Revised,' (2017) 20(1) *Max Planck Yearbook of United Nations Law Online*, 1, <https://doi.org/10.1163/13894633_02001002> (resolutions' preambles can illuminate object and purpose but should be read with caution).

In discounting the legal importance of the resolutions' reference to the UNFCCC objective, Romera notes that 'when it comes to the text of the recommendations, the same resolution states that 'emphasis should be on those policy options that will reduce aircraft engine emissions without negatively impacting the growth of air transport.'⁸⁷ She also writes that CORSIA is just such a policy option.⁸⁸ But the text of subsequent ICAO climate resolutions stated, in connection with market-based mitigation measures, 'that no effort should be spared to obtain means to support the reduction and stabilization of CO₂ emissions from all sources.'⁸⁹ And, in any event, placing 'emphasis' on policy options does not negate ICAO's repeated citations to the UNFCCC objective in ICAO's climate resolutions and the integration of that objective into ICAO's climate mandate.⁹⁰

3.3 ICAO's established practice of interpreting the Chicago Convention as illustrated by its policy decisions leading up to CORSIA

In addition to having a textual basis, ICAO's interpretation of the Chicago Convention as including a mandate to reduce or limit GHG emissions from international aviation is supported by ICAO's established practice of asserting its right to do so through its Assembly and Council.⁹¹ ICAO's practice thus fulfilled a traditional purpose of allocating a legal competence between ICAO and its member states and between ICAO and the international community generally.⁹²

ICAO has long embraced its role as the regulator of GHG emissions from international aviation. In 1998, less than a year after the Kyoto Protocol was adopted, the ICAO Assembly asserted ICAO was the proper decision-making forum for environmental matters related to the aviation, and called on the ICAO Council to 'maintain the initiative in developing policy guidance on these matters, and not leave such initiatives to other organizations.'⁹³ ICAO considered imposing mandatory obligations on its member states to mitigate climate change in response to the Protocol, but instead called on them to implement voluntary measures to mitigate climate change impacts.⁹⁴ The ICAO Council also issued numerous non-binding guidance documents indirectly related to climate change that sought to maximize aircraft fuel efficiency and minimize emissions through operational policies such as navigation, ascent and descent, and the use of sustainable jet fuels.⁹⁵ Every ICAO Assembly since 2004 resolved that ICAO should continue its 'leadership' on civil aviation's environmental aspects and its 'responsibility' to limit or reduce the impact of global aviation on the climate.⁹⁶ Moreover, each of these resolutions has been termed 'continuing resolutions' of policy, showing that ICAO viewed its role in this area as consistent from 2004 through the present.⁹⁷

Further establishing ICAO's practice of regulating GHG emissions' from international aviation, the ICAO Assembly in 2010 and 2013 set ICAO's goal of carbon neutral growth post-2020, and determined to use a MBM and other measures to achieve that goal. These actions were the first time ICAO acted to concretely carry out the mandate that it had long claimed. Adopted in 2010, ICAO Assembly Resolution 37–19 recognized that the airline industry had committed to carbon neutral growth post-2020, and to reduce carbon emissions by 50 percent by 2050 from 2005 levels.⁹⁸ And it provided that, 'without any attribution of specific obligations to individual States, ICAO and its Member States with relevant organizations will work together to strive to achieve a collective medium term global aspirational goal of keeping the global net carbon emissions from international aviation from 2020 at the same level.'⁹⁹ The same resolution directed the

⁸⁷ Romera, note 13, 184.

⁸⁸ *ibid.*

⁸⁹ ICAO Assembly Resolution 40–18, para. 16.

⁹⁰ The prevention of dangerous climate change also appears to be a basis for coordination between UNFCCC bodies and ICAO. (See Romera, note 13, at 155.)

⁹¹ See Blokker, note 50, 957 ('it will be more convincing to follow a particular interpretation if this interpretation finds support in practice').

⁹² See Ahlborn, note 15, 425 (describing traditional purposes of an organization's 'established practice').

⁹³ ICAO Assembly Resolution A32–8, note 78, Appendix A.

⁹⁴ Piera, note 3, 101.

⁹⁵ *ibid.*, 94–97, 100 n. 89; Abeyratne, note 27, 74.

⁹⁶ See International Civil Aviation Organization, Assembly Resolutions In Force (as of 4 October 2004), Doc. 9848, Resolutions 35–5; International Civil Aviation Organization, Assembly Resolutions In Force (as of 28 September 2007), Doc. 9902; 36–22; ICAO Assembly Resolution 37–19, note 10; ICAO Assembly Resolution 38–18, note 11; See International Civil Aviation Organization, Assembly Resolutions In Force (as of 6 October 2016), Doc. 10075, Resolution 39–3, Resolution 39–3; see also Piera, note 3, 44–45, n. 17; Romera, note 8, 264.

⁹⁷ *ibid.*

⁹⁸ Resolution 37–19, note 10, preamble.

⁹⁹ *ibid.*, Art. 7.

ICAO Council to implement a global CO₂ standard for new aircraft types.¹⁰⁰ It also contained an annex with guiding principles for the design and implementation of MBM's, although it did not direct the ICAO Council to actually implement an MBM scheme.¹⁰¹

ICAO's member states' reservations to ICAO Assembly resolutions could arguably show a lack of established practice. The 2010 resolution passed the Assembly unanimously.¹⁰² But, 44 states, including EU states and the United States, made reservations to the 2010 resolution on the basis that the 2020 goal was not ambitious enough. And six developing states objected that the 2020 goal would be too burdensome.¹⁰³ These reservations could negate ICAO's mandate to regulate GHG emissions if they meant that the resolution did not express the will of all of its members that the mandate existed: established practice 'can be neither disputed nor uncertain;' and legal scholars contend that 'protest or negative voting, even of a single member would impede' a showing of established practice.¹⁰⁴ But here, no state made a reservation to the portions of the resolution that established ICAO's legal authority to regulate GHG emissions under the Chicago Convention, or referenced the requirements of the Kyoto Protocol or the objectives of the UNFCCC.¹⁰⁵ Thus, these states may have objected to the *substance* of the ICAO's climate policy but not to whether ICAO had a *mandate* to act.

The 2013 ICAO Assembly continued on the path set in 2010. Assembly Resolution 38–18 affirmed Resolution 37–18's 'global aspirational goal' of carbon neutral growth after 2020.¹⁰⁶ It sets forth the same 'guiding principles' for the development of an MBM as Resolution 37–19's Annex.¹⁰⁷ But in a change from the previous resolutions, the ICAO Assembly for the first time directed the ICAO Council to establish a 'global MBM scheme' to meet ICAO's climate change goal, and to prepare the scheme to be ready for adoption at the 2016 ICAO Assembly. As with Resolution 37–19, reservations were made by some states to Resolution 38–18, but they did not relate to ICAO's mandate to regulate GHG emissions from international aviation in order to meet the UNFCCC objective.¹⁰⁸

ICAO's established practice is illustrated by its reaction to the EU's effort to include international aviation in its Emissions Trading System (ETS). As 'ICAO's sluggishness and inaction [on developing a MBM for international aviation] became apparent,' the European Parliament and Council in 2008 decided to include international aviation in the EU's ETS.¹⁰⁹ Beginning in January 2012, all EU and foreign aircraft going to or from EU airspace would be required to obtain or purchase credits within the ETS reflecting emissions from aircraft for their entire flight, including over the high seas or non-EU airspace.¹¹⁰ Critics—including the airline industry and developing countries—viewed the EU's action as an illegal assertion of extraterritorial jurisdiction, noting that only a small percentage of emissions from international flights entering the EU occur in EU territory.¹¹¹

ICAO objected to the EU's decision. Over the opposition of European states, the ICAO Council in 2011 declared that the EU's action was inconsistent with international law, in particular the Chicago Convention.¹¹² In the Council discussion, a large number of states, including those that opposed the EU's inclusion of international aviation in its ETS, stated that the ICAO needed to accelerate the development of its own MBM.¹¹³ The EU Commission suspended the implementation of the ETS aviation directive in 2012, possibly as leverage ahead of the ICAO's Assembly the following year.¹¹⁴ And, as noted *ante*, in 2013 the ICAO Assembly

¹⁰⁰ *ibid.*, para. 8.

¹⁰¹ Piera, note 3, 109–110; see ICAO Assembly Resolution 38–18, note 11, Annex. Certain of these guiding principles will be discussed in the following section.

¹⁰² International Civil Aviation Organization, Assembly – 37th Session, Plenary, Action Sheet No. 2, <https://www.icao.int/Meetings/AMC/Assembly37/Documents/ActionSheets/action_2_en.pdf>.

¹⁰³ International Civil Aviation Organization, Reservations to Resolution 37–19 (hereinafter ICAO Assembly Resolution 37–19 Reservations), <<https://www.icao.int/Meetings/AMC/Assembly37/Pages/Reference-Documents.aspx>>.

¹⁰⁴ ILC Commentary on VCLT (1986), note 55, para. 25; Peters, note 53, 633; Racounas, note 15, 168.

¹⁰⁵ ICAO Assembly Resolution 37–19 Reservations, note 103.

¹⁰⁶ ICAO Assembly Resolution 38–18 note 11, Art. 18.

¹⁰⁷ *ibid.*, Art. 7.

¹⁰⁸ See International Civil Aviation Organization, Summary Listing of Reservations to Resolution 38–18, <https://www.icao.int/Meetings/a38/Documents/Resolutions/summary_en.pdf> (hereinafter Reservations to ICAO Assembly Resolution 38–18).

¹⁰⁹ Romera, note 8, 273; Piera, note 3, 124 (citing EU Aviation Directive).

¹¹⁰ Piera, note 3, 125–126; Romera, note 8, 274.

¹¹¹ Piera, note 3, 126, n. 61.

¹¹² *ibid.*, 139; International Civil Aviation Organization, 'Working Paper – Council – 194th Session, Subject No. 50: Questions Related to the Environment,' (2011), Doc. ICAO C-WP/13790.

¹¹³ Piera, note 3, 127.

¹¹⁴ Romera, note 8, 275.

resolved to develop and implement a mandatory MBM to meet ICAO's GHG emission regulation goals.¹¹⁵ Thus, the EU's action appeared to have catalysed ICAO's adoption—for the first time—of a specific limit on international aviation's GHG emissions and concrete efforts to meet that limit.¹¹⁶ And ICAO's action, justified with its authority under the Chicago Convention, illustrates ICAO's practice of interpreting the Convention to give it a mandate of regulating GHG emissions from international aviation.

As the foregoing demonstrates, ICAO's actions relating to GHG emissions from international aviation since 1995 meet the test for an 'established practice' under international law. ICAO took formal actions—through Assembly resolutions—over a period of years that form an integral part of how it views its mandate under the Chicago Convention.¹¹⁷ Its mandate is not disputed or uncertain given that the same language regarding the Convention and ICAO's mandate has been repeated since 2004. ICAO's practice of assuming sectoral management of GHG emissions from international aviation served a classic purpose of 'established practice' of enhancing organizational efficiency by allocating competences between an international organization and its member states.¹¹⁸ ICAO's practice therefore not only served 'as a link between the general law of treaties and the law of international organizations,' but also adapted the Chicago Convention and ICAO's institutional role to the climate change era and international aviation's part in it.¹¹⁹

3.4 ICAO's member states' subsequent practice applying the Chicago Convention

While established practice can have internal effects of allocating competences between an organization and its member states, subsequent practice 'has effects inside and outside the organization due to the dual nature of constituent instruments as constitutional contracts.'¹²⁰ Like established practice, subsequent practice 'has to be consistent in order to obtain legal relevance.'¹²¹ And, as noted *ante*, because subsequent practice is focused on the consent of state parties, it generally is demonstrated through unanimous action or statements.¹²² As with established practice, subsequent practice can be shown through an organization's organs that serve as a forum for member states—such as the ICAO Assembly.¹²³

The unanimous decisions of the ICAO Assembly discussed in the preceding section arguably constitute a subsequent practice by the ICAO states of interpreting the Chicago Convention to give ICAO a mandate to regulate GHG emissions from international aviation.¹²⁴ The Chicago Convention provides for agreement to ICAO Assembly resolutions by a majority vote of member states with each state getting one vote.¹²⁵ No dissenting votes were recorded for any ICAO Assembly since 1995.¹²⁶ But, ICAO member states have expressly stated that ICAO agrees to matters by consensus even as member states lodge reservations to assembly resolutions.¹²⁷ An organization's established practice—such as agreeing to resolutions by consensus even as reservations to resolutions are lodged—can modify or even precede subsequent practice by setting the parameters for when subsequent practice is shown.¹²⁸ It thus appears that ICAO has such an institutional practice that must be taken into account when evaluating its member states' subsequent practice of interpreting the Chicago Convention.¹²⁹

As noted *ante*, the ICAO Assembly resolutions in 2010 and 2013 on climate change were agreed to unanimously, but reservations were made about ICAO's level of ambition and the design of an MBM.¹³⁰ But, no reservations were made as to ICAO's mandate to regulate GHG emissions from international aviation under the Chicago Convention, the relevance of the Kyoto Protocol's reference to ICAO, or the importance of the

¹¹⁵ ICAO Assembly Resolution 38–18, note 11, at para. 7.

¹¹⁶ Romera, note 8, 275.

¹¹⁷ See ILC Commentary on VCLT (1986), note 55, 21, para. 25.

¹¹⁸ Ahlborn, note 15, 425.

¹¹⁹ Peters, note 53, 632 (describing purposes of organizational practice). This article does not suggest that an organization's practice of adapting its mandate is without limit, only that the facts presented here support ICAO's interpretation of the Chicago Convention. (Cf. Abeyratne, note 27, at 61 (ICAO's jurisdiction over space travel would require amendment of Chicago Convention).)

¹²⁰ Ahlborn, note 15, 428.

¹²¹ Peters, note 53, 632.

¹²² *ibid.*

¹²³ *ibid.*, 633; see also Ahlborn, note 15, 428.

¹²⁴ See VCLT (1969), note 54, Art. 31(3)(b).

¹²⁵ Chicago Convention, note 11, Art. 45.

¹²⁶ ICAO Listing of All Assembly Sessions, <<https://www.icao.int/publications/Pages/assembly-archive.aspx>>.

¹²⁷ See, e.g., Reservations to ICAO Assembly Resolution 37–19, note 103.

¹²⁸ Peters, note 53, 633–634.

¹²⁹ See Ahlborn, note 15, 427.

¹³⁰ Reservations to ICAO Assembly Resolutions 37–19 and 38–18, notes 103 and 108.

UNFCCC's objective of preventing dangerous climate change.¹³¹ Accordingly, these resolutions demonstrate ICAO's member states' understanding of ICAO's mandate as encompassing the regulation of GHG emissions from international aviation so as to meet the UNFCCC's objective.¹³² And, as subsequent practice applying a constituent instrument, they have an external legal consequence of establishing the agreement of ICAO's members as to the interpretation of the organization's mandate under the Chicago Convention.¹³³

4 ICAO's obligations under international law to reduce or limit GHG emissions from international aviation

Having established that ICAO has a mandate, or core function, to reduce or limit GHG emissions from international aviation so as to prevent dangerous climate change, this section assesses ICAO's legal obligations to do so. Determining what law governs an international organization such as ICAO requires applying theories that have differing levels of acceptance in jurisprudence and by legal scholars. The ICJ found long ago that international organizations are bound by 'obligations incumbent upon them under general rules of international law, under their constitutions or under international agreements to which they are parties.'¹³⁴ But, as will be discussed below, they may also be bound by agreements to which they are not parties. In addition, there can be circumstances where an organization's mandate engenders a positive obligation to act, which this article argues is the case with ICAO's mitigation of the climate impacts of international aviation.

4.1 Do the international climate change treaties impose an obligation on ICAO to mitigate GHG emissions from international aviation?

At first sight, the climate change treaties do not appear to impose any obligation on ICAO: of the three treaties, only the Kyoto Protocol refers directly to ICAO; and its Article 2(2) only requires a sub-set of Kyoto Protocol signatories—Annex I States—to 'work through' ICAO to achieve reductions of emissions from bunker fuels.¹³⁵ Moreover, the UNFCCC was open for signature to United Nations specialized agencies, but ICAO did not join, and therefore could not join the Kyoto Protocol or the Paris Agreement.¹³⁶ Binding ICAO to these treaties' obligations would arguably violate the *pacta tertiis* rule, pursuant to which treaties cannot have legal consequences for non-parties.¹³⁷

Nevertheless, even in the absence of an express textual indication that ICAO is bound by these treaties' obligations, it could arguably be indirectly bound through its member states based on two different theories: 1) international organizations can succeed to sovereign powers conferred on them by states as well as obligations linked to those powers; or 2) international organizations can be 'transitively' bound by those states' treaty obligations.¹³⁸ But, as demonstrated here, neither theoretical framework appears to impute ICAO member states' obligations under the international climate change treaties to ICAO.

When 'functional succession' occurs, international organizations succeed to states' sovereign authority and thereby act as legal 'peers' of states.¹³⁹ Examples include the United Nation's succession of supervisory functions over non-independent territories from the League of Nations, and the European Community's succession to its members' international trade policy under the General Agreement on Trades and Tariffs

¹³¹ *ibid.*

¹³² See *Use of Nuclear Weapons*, note 26, (reviewing World Health Organization's member states' subsequent practice to determine organization's function and purpose).

¹³³ VCLT (1969), *supra* note 54, Art. 31(3)(b).

¹³⁴ *Interpretation of the Agreement of 25 March 1951 between the WHO and Egypt*, Advisory Opinion, I.C.J. Reports 1980, p. 73, para. 37. *Reparation for Injuries*, note 50, 174.)

¹³⁵ Kyoto Protocol, note 9, Art. 2(2). See UNFCCC note 70; Paris Agreement note 81. See Piera, note 3, 44–45 (Kyoto Protocol by its terms does not impose obligation on ICAO but designates it as a forum for state action).

¹³⁶ UNFCCC, note 70, Art. 20; Kyoto Protocol, note 9, Art. 24(1); Paris Agreement, note 80, Art. 20.

¹³⁷ VCLT (1986), note 15, Art. 34; but see K. Daugirdas, 'How and Why International Law Binds International Organizations,' (2016) 57 *Harvard International Law Journal*, 335 (The VCLT (1986) has never entered into force and has debatable legal significance).

¹³⁸ Daugirdas, note 137, 350, 364 (citing F. Megret & F. Hoffman, 'The UN as a Human Rights Violator—some Reflections on the United Nations Changing Human Rights Responsibilities,' (2003) 25 *Human Rights Quarterly*, 318 (arguing that United Nations should be transitively bound by their member states' treaty obligations), <<https://www.jstor.org/stable/20069667>>; O. De Shutter, 'Human Rights and the Rise of International Organizations: The Logic of Sliding Scales in the Law of International Responsibility,' (2009) (CRIDHO Working Papers Faculte de Droit de L'Universite Catholique de Louvain), 10 (discussing functional succession theory). <<https://ssrn.com/abstract=2446913>>.

¹³⁹ Daugirdas, note 137, 357, 369.

(GATT).¹⁴⁰ In these cases, the rights and obligations that were succeeded to were in existence at the time the organization was created, and succession only occurred when there was replacement or displacement of the predecessor such that the organization had final and binding authority over territory or a specific policy area.¹⁴¹

Because ICAO's member states gave it plenary authority to set 'rules of the air' over the high seas under Article 12 of the Chicago Convention, and reserved for themselves no option to opt out of or alter such rules, ICAO arguably succeeded to these powers.¹⁴² But, the climate change treaties were concluded some 50 years after the Chicago Convention. Thus, this is not a situation like *International Fruit*, where the European Community succeeded to its members' rights and obligations under the GATT, which they held at the time the Community was created.¹⁴³ And ICAO could not have succeeded to its member states' climate obligations, because those obligations did not exist when ICAO was created.¹⁴⁴

Even if ICAO did not succeed to its members' obligations, do they 'transitively' bind it? That theory posits that organizations should be bound to the same obligations as their members, and application of this theory avoids or resolves treaty conflicts between organizations and their member states.¹⁴⁵ The Chicago Convention, UNFCCC, and Paris Agreement have overlapping membership. One could therefore argue that ICAO, as a vehicle for the states that created it, became transitively bound by the substantive obligations of the UNFCCC and Paris Agreement when ICAO's member states signed and ratified those instruments. Under a transitive theory, ICAO's states could not use the Convention's objective of promoting the 'development' of international aviation to avoid their obligation under Article 4 of the UNFCCC to reduce or limit GHG emissions from all forms of transportation, including aviation, and their obligation under Articles 2 and 3 of the Paris Agreement to take ambitious efforts to hold global warming to well below 2 degrees.¹⁴⁶ Moreover, some scholars argue that even a single member state's conclusion of a treaty with substantive obligations imputes those obligations to their organization.¹⁴⁷ Thus, even though the membership between the Chicago Convention and the Kyoto Protocol differ, ICAO was arguably bound to that treaty's provisions as well.

This author believes it is more defensible to interpret ICAO's mandate under the Convention as imposing a climate obligation—as discussed in the following section—rather than impute the climate change treaties' obligations from ICAO's member states to ICAO. As Kristina Daugirdas explains, the VCLT (1969) 'sets out some default rules but ultimately leaves it to the participating states to determine how to structure the relationship between ... two treaties to the extent they conflict.'¹⁴⁸ A rule that automatically binds international organizations to their member states' obligations would diminish the ability of states to modify their treaty obligations pursuant to the VCLT.¹⁴⁹ And it would negate the role of rules of international organizations—including their constituent instruments—in international law, which can allow for amendment to constituent instruments, subsequent practice interpreting such instruments, or provide for institutional decision-making that establishes organizational practice.¹⁵⁰ This article does not assert that there can *never* be circumstances where an organization would be transitively bound to its members' treaty obligations. But here, ICAO's members entered into a separate treaty regime decades after the Convention was ratified that excluded international aviation from the obligations it imposes on states. Thus, in light Daugirdas's reasoning and the particular relationship between the climate regime and ICAO, it is more plausible to view the climate change treaties as legally integrated into ICAO's mandate under the Chicago Convention rather than as imposing legal obligations directly on ICAO.

¹⁴⁰ *ibid.*, *International Status of South-West Africa*, Advisory Opinion 1950 ICJ Rep. 128, 132–138; *International Fruit Company NV v. Produktschap voor Groenten en Fruit*, [1972] ECR 1219 (hereinafter *International Fruit*), para 18. The European Court of Justice decided *International Fruit*; that court was part of the European Community itself. (See Treaty Establishing the European Community, Rome 25 March 1957, Official Journal C325, Art. 4.)

¹⁴¹ Daugirdas, note 137, 369 (citing *International Status of South-West Africa*).

¹⁴² Chicago Convention, note 11, Art. 12; *ibid.*, 370, n. 250 (noting that ICAO's quasi-legislative authority over the high seas is a rare example of an international organization's functional succession over a policy area).

¹⁴³ *International Fruit*, note 140. Scholars note that succession is arguably broader under international law than *International Fruit* and subsequent ECJ cases suggest. (See T. Ahmed and I. Butler 'The European Union and Human Rights: an International Law Perspective,' (2006) 17(4) *European Journal of International Law*, 790–791. <10.1093/ejil/chl029>.)

¹⁴⁴ Cf. cases cited at note 140.

¹⁴⁵ Daugirdas, note 137, 368; Megret, note 138, 318.

¹⁴⁶ UNFCCC, note 18, Art. 2 and 4; Paris Agreement, note 80, Art. 2 and 3. See generally Romera, note 13 (discussing conflicting aims and objectives of Chicago Convention and climate regime).

¹⁴⁷ See Daugirdas, *supra*, note 137, 349–350 (discussing views of Emmanuel de Vattel and Hersch Lauterpacht).

¹⁴⁸ *ibid.*, 351, (citing VCLT (1969), note 54, Art. 30(2)–(3)).

¹⁴⁹ *ibid.*

¹⁵⁰ *ibid.*

4.2 ICAO's mandate of limiting or reducing GHG emissions from international aviation as giving rise to a role responsibility to mitigate climate change

As discussed earlier, ICAO and its member states have engaged in 'constitutional development' to expand ICAO's mandate, or core function, under the Chicago Convention to include the mitigation of aviation's climate impacts.¹⁵¹ But, just because an international organization has the *right* to act in a certain way does not mean it has an *obligation* to do so.¹⁵² International organization's obligations are derived from treaties, customary international law, or their rules, but unlike states, international organizations are party to few treaties, and customary international law has little binding force on them. Therefore, as discussed *ante*, international courts have generally examined organizations' obligations with reference to their constituent instruments and rules. But there is no clear basis for determining an organization's responsibilities with regard to an omission or failure to carry out its mandate.¹⁵³

In response to this gap in international law, Jan Klabbers recently developed a theory of 'role responsibility' that holds that an international organization can have an international obligation, independent from any other, to carry out its mandate.¹⁵⁴ This obligation to act stems 'from making a promise and from occupying a specific office or social role.'¹⁵⁵ It exists separately from any other obligation, and provides that organizations 'can be held responsible for not living up to their assigned roles.'¹⁵⁶ Klabbers analogizes to criminal law, where one can be held liable for 'failing to act in situations where acting has been due.'¹⁵⁷ And he reasons that because an organization's mandate 'can play a role in delimiting powers, or delimiting privileges and immunities, as is commonly thought [citation omitted] then it must also be deemed to have some analytical rigour in delimiting the relevant from the irrelevant omission for purposes of assigning responsibility.'¹⁵⁸ Thus, role responsibility can arise when an organization is in a position to act, has the mandate to act, and fails to do so.¹⁵⁹ Under the role responsibility framework, Klabbers argues that the United Nations could have incurred legal responsibility for failing to intervene and halt the genocide in Rwanda in 1994 because it had the mandate to act yet did not.¹⁶⁰

Can Klabbers' theory be applied to ICAO's regulation of GHG emissions from international aviation? ICAO has long held itself out as the entity with authority and competence to manage that important issue. And by referencing Article 44 of the Chicago Convention—which gives ICAO authority over the safe and orderly development of international aviation—it has done so not as part of its discretionary power, but instead, as part of its core function, or mandate. Moreover, the international community confirmed that ICAO has this mandate through the text and scope of the international climate change treaties, particularly Article 2 of the Kyoto Protocol and the omission of international aviation emissions from nationally determined contributions in the Paris Agreement.¹⁶¹ Under Klabbers' theory, because ICAO is in a position to act to mitigate GHG emissions from international aviation, and has the mandate to do so, it likewise has a positive obligation under international law. Klabbers' theory thus offers a supportable framework to argue that if ICAO does not reduce or limit GHG emissions, or does so ineffectively, it could commit an internationally wrongful omission and be held responsible under international law.¹⁶²

Klabbers theory applies with particular force here because ICAO's mandate encompasses the UNFCCC Article 2 objective of stabilizing GHG emissions so as to prevent dangerous climate change. There is extensive scholarship on the meaning of that provision and how it relates to the UNFCCC's Article 4 obligations.¹⁶³ Some view the objective as part of an 'open-ended obligation of conduct' imposed by the UNFCCC, while

¹⁵¹ See Section 3.

¹⁵² VCLT (1969), note 54, Arts. 34–37 (discussing difference between rights and obligations).

¹⁵³ Klabbers, note 16, 1154.

¹⁵⁴ Klabbers, note 16, 1137.

¹⁵⁵ *ibid.*, 1154.

¹⁵⁶ *ibid.*, 1135.

¹⁵⁷ *ibid.*, 1152.

¹⁵⁸ *ibid.*, 1137.

¹⁵⁹ *ibid.*, 1137.

¹⁶⁰ *ibid.*, 1138–1139.

¹⁶¹ And as Romera states, the UNFCCC Article 2 'implicitly' includes international bunker fuels because the UNFCCC 'calls for action from all sectors of the economy.' (Romera, note 13, 181.)

¹⁶² *ibid.*, 1137–1138.

¹⁶³ See generally M. Oppenheimer, 'Article 2 of the UNFCCC: Historical Origins, Recent Interpretations,' (2005) 73 *Climate Change*, 165. <10.1007/s10584-005-0434-8>.

others contend it imposes no obligation at all.¹⁶⁴ Romera sees Article 2 as a 'rule of interpretation' for the quantified obligations established in the Kyoto Protocol, Paris Agreement, and for subsequent outcomes.¹⁶⁵ This article will not attempt to resolve that debate. But, regardless of what 'dangerous climate change' means, it stands to reason that the UNFCCC objective serves as a legal 'guide to the sort of activities that may be expected' from ICAO, in other words, the reduction of emissions to a certain level in order to achieve an environmental outcome.¹⁶⁶ In that sense, ICAO's incorporation of the UNFCCC objective into its mandate supports the existence of its role responsibility, and is also a principle that forms the content of the obligation itself.

Conclusion

As shown in this article, ICAO has an obligation under international law to reduce GHG emissions from international aviation in order to prevent dangerous climate change, and this obligation arises from ICAO's mandate under the Chicago Convention rather than directly from the international climate change treaties. Although the Convention does not mention environmental protection or the prevention of climate change, over a series of decades ICAO interpreted its constituent instrument as giving it the power to regulate GHG emissions in order to achieve the UNFCCC's Article 2 objective. ICAO's interpretation of the Convention is supported by its established practice of expanding its mandate to include environmental protection and the mitigation of climate change, and ICAO's member states' subsequent practice of applying the Convention to broaden its role. And although the obligations that the climate change treaties impose on ICAO's member states could arguably be imputed to ICAO, it is more consistent with ICAO's legal personality and autonomy to view its climate change obligation as deriving from the Chicago Convention under a role responsibility framework.

ICAO's compliance with its obligation is no small task given the size and complexity of the international aviation industry, and ICAO's actions hold significant implications for the climate. As Jan Klabbers points out, as 'soon as organizations become more than debating clubs, as soon as they exercise public authority, it becomes possible and plausible to wonder whether they do a good job, or whether someone else would have done a better.'¹⁶⁷ The author hopes the analysis here will help contribute to a legal structure within which ICAO can be held legally accountable for its mitigation of climate change.

Competing Interests

The author has no competing interests to declare.

¹⁶⁴ Compare B. Meyer, 'Obligations of Conduct in the International Law of Climate Change: a Defence,' (2018) 27(2) *Review of European, Comparative, and International Environmental Law*, 132, <10.1111/reel.12237> with A. Zahar, 'Collective Obligation and Individual Ambition in the Paris Agreement,' (2019) 3 *Transnational Environmental Law*, 7, n. 12, <10.1017/S2047102519000281>.

¹⁶⁵ Romera, note 13, 181 (citing K. Ott and G. Klepper, 'Reasoning Goals of Climate Protection: Specification of Article 2 UNFCCC', *Federal Environmental Agency*, [2004]).

¹⁶⁶ Klabbers, note 16, 1158.

¹⁶⁷ J. Klabbers, 'The Paradox of International Institutional Law,' (2008) 5 *International Organizations Law Review*, 169. <10.1163/157237408X326138>.

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