Regulating the Environmental Integrity of Carbon Offsets for Aviation: the International Civil Aviation Organization's Additionality Rule as International Law

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The International Civil Aviation Organization (ICAO) is implementing a Carbon Offset Reduction Scheme for International Aviation (CORSIA). This article applies the law of international responsibility to examine whether ICAO's acts and decisions creating CORSIA require that ICAO ensure CORSIA's environmental integrity and focuses on the requirement that CORSIA offsets represent additional reductions, avoidance, or removals in greenhouse gas emissions beyond what would otherwise occur. It finds ICAO created an 'additionality rule' for CORSIA. The article further determines that this rule should be construed as imposing an international obligation on ICAO, the violation of which could trigger ICAO's legal responsibility. The article concludes by reflecting on potential standards for measuring ICAO's compliance with this rule, and how classifying it as part of international law could help hold ICAO to account for CORSIA's environmental integrity.

I. Introduction

If an international organization is entrusted with responsibility for regulating greenhouse gas emissions (GHGs) from an economic sector, what law governs its environmental effectiveness and how can it be held accountable? Starting in 2021, airlines around the world must mitigate any growth in GHG emissions from their international flights through the Carbon Offset Reduction Scheme for International Aviation (CORSIA), which will be implemented by the International Civil Aviation Organization (ICAO).[1] After a period of public comment on program applications, ICAO's 36-member governing Council, following the recommendations of its Technical Advisory Body (TAB), reviewed more than 20 offset programs run by international organizations, governments, and non-government organizations. The Council determined that a subset met the ICAO CORSIA Emissions Units Criteria,[2] and therefore units from those programs may be used by airline operators to satisfy their CORSIA obligations.[3] In October 2020, TAB recommended additional programs and changes to the scope of previously-approved programs; its recommendations were approved by the ICAO Council on November 20, 2020.[4]

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1 ICAO is a specialized agency of the United Nations headquartered in Montreal, Canada. (International Civil Aviation Organization (ICAO), Convention on International Civil Aviation, 7 December 1944, (1994) 15 *United Nations Treaty Series* 295 (Chicago Convention).)

2 International Civil Aviation Organization 'ICAO Document CORSIA Emissions Unit Eligibility Criteria' (March 9, 2019) <https://www.icao.int/environmental-protection/CORSIA/Pages/CORSIA-Emissions-Units.aspx> accessed 9 December 2020, 2 (CORSIA Offset Criteria) (defining additionality).

3 See International Civil Aviation Organization, 'CORSIA Eligible Emission Units' (August 2020) <https://www.icao.int/environmental-protection/CORSIA/Documents/TAB/TAB%202020/ICAO_Doc_CORSIA_Eligible_Emissions_Units_August_2020.pdf> accessed 9 December 2020.

4 International Civil Aviation Organization, 'Technical Advisory Board (TAB) Recommendations on CORSIA Eligible Emissions Units' (October 2020) < https://www.icao.int/environmental-protection/CORSIA/Documents/TAB/TAB%202020/TAB_October2020Report_Excerpt_Section4_EN.pdf> accessed 9 December 2020; International Civil Aviation Organization, 'Order of Business for the Tenth and Eleventh Meetings, 221st Session of ICAO Council,' Doc. C-O/B 221/10.

It is unclear whether CORSIA will actually reduce GHG emissions.[5] Scientists and economists' concerns are based on CORSIA's proposed design and on environmental failures in other carbon markets, including the Kyoto Protocol's Clean Development Mechanism (CDM).[6] The stakes for the climate are important: 'ICAO's CORSIA is estimated to have a reducing impact of 0 to 0.3 gigatons CO_2 emissions per year on global emissions in 2030,' and this wide range 'implies that the result will depend on the way the offsetting rules will be set.'[7] Adding to the uncertainty is CORSIA's baseline: ICAO set average 2019-2020 emissions as a cap beyond which emissions growth will have to be mitigated, but severe disruptions to international air travel from the novel coronavirus led ICAO to revisit that decision and change CORSIA's baseline to 2019 for the program's Pilot Phase (2021-2023).[8] And, even as ICAO changed CORSIA's baseline, the question of how to legally assess ICAO's compliance with its climate rules remains.

This article therefore examines what law applies to ICAO's operation of CORSIA. Assuming that ICAO is an international organization with legal personality, it uses the framework of the International Law Commission's Draft Articles on the Responsibility of International Organizations (ILC DARIO Articles)[9] to evaluate whether ICAO's acts and resolutions establishing CORSIA require CORSIA offsets to reduce GHG emissions beyond what they would otherwise be, and whether any such requirement constitutes a legal obligation that binds ICAO under international law. The article first provides background information on international aviation and its climate impacts. It then discusses ICAO's climate policies, focusing on its additionality standard for the environmental integrity of CORSIA offsets, and finds that this standard is a 'rule' within the meaning of the ILC DARIO Articles. The article next considers whether ICAO's 'additionality rule' should be considered an international obligation, the violation of which could trigger ICAO's legal responsibility.[10] It concludes by reflecting on possible standards to assess ICAO's compliance with the rule, and how the rule's characterization as part of international law could provide accountability for CORSIA's environmental integrity.

II. International Aviation's Impact on the Climate and ICAO's Response

Before the decrease in international aviation due to the coronavirus, ICAO predicted that GHG emissions from international aviation could triple by 2050 compared with 2015.[11] Emissions from international aviation have an indeterminate legal status under the climate change treaties, and ICAO has long held itself out as having the institutional mandate for addressing aviation's climate impacts.[12] But ICAO did not set any reduction target until 2010, and that year set an 'aspirational goal' that the growth in GHG emissions would be carbon-neutral after 2020, and also

5 Christopher Lyle, 'Beyond the ICAO's CORSIA: Towards a More Climatically Effective Strategy for Mitigation of Civil-Aviation Emissions' (2018) 8(1-2) Climate Law 104; Jutta Kill, 'Unearned Credit: Why Aviation Industry Forest Offsets are Doomed to Fail,' (November 2017) Fern: Making the EU Work for People and Forests; Catherine Ivanovic et al., 'Climate Benefits of Proposed Carbon Dioxide Strategies for International Shipping and Aviation,' (2019) 19 Atmospheric Chemistry and Physics 14949 (CORSIA 'will reduce carbon dioxide emissions from international aviation').

6 See ibid; Martin Cames et al., 'How Additional is the Clean Development Mechanism?' (Oko Institute March 2016), 11 (up to 85 percent of CDM credits in EU Emissions Trading System do not reduce GHG emissions beyond what would otherwise occur); but see Patrick Byer and Michael Aklin, 'The European Union's Emissions Trading System Reduced Emissions Despite Low Prices,' (2020) 16 Proceedings of the National Academy of Sciences 8804.

7 Lyle (n 5), 118.

8 International Civil Aviation Organization, 'ICAO Council Agrees to the Safeguard Adjustment for CORSIA in Light of COVID-19 Pandemic,' (30 June 2020) <https://www.icao.int/Newsroom/Pages/ICAO-Council-agrees-to-the-safeguard-adjustment-for-CORSIA-in-light-of-COVID19-pandemic.aspx> accessed 9 December 2020.

9 International Law Commission, 'Draft Articles on the Responsibility of International Organizations with commentaries,' *Yearbook of the International Law Commission* (2011), vol. II, Part Two, UN Doc. A/66/10 (ILC DARIO Articles).

10 As discussed in Part IV, such a violation could arise through a decision by the ICAO Council, as the conduct of an international organization's organ in performance of that organ's function 'shall be considered an act of that organization under international law.' (ibid, Art. 6(1).) The identification of ICAO's member states' obligations under international law for the mitigation of climate change caused by international aviation or CORSIA's operations are beyond the scope of this article.

11 International Civil Aviation Organization, 'Trends in Emissions that Affect Climate Change,' <https://www.icao.int/environmental-protection/Pages/ClimateChange_Trends.aspx> accessed 9 December 2020. Aviation also causes significant 'non-CO_2 climate impacts' from contrails, radiative forcing, and the emission of other pollutants at high altitudes. (D.S. Lee, et. al. 'The Contribution of Aviation to Anthropogenic Climate Forcing for 2000 to 2018,' (2021) 244 Atmospheric Environment 117834 (discussing aviation's non-carbon radiative forcing caused by high altitude water vapor and NO_2 emissions).

12 Beatriz Martinez Romera, *Regime Interaction and Climate Change* (Routledge 2018), 77 (Paris Agreement's mitigation goals encompass international aviation emissions, but national pledges 'not

enacted a goal of two percent annual sectoral fuel efficiency gains.[13] In 2016, ICAO implemented several policies to meet its post-2020 goal, including CORSIA.[14] CORSIA will require airline operators to purchase carbon credits to offset their pollution above 2019 baseline levels by allowing them to continue polluting while paying for separate projects that theoretically reduce GHG emissions. After its three-year pilot phase, CORSIA will be fully implemented in 2024.[15] In 2022, the ICAO Council will review CORSIA's implementation and consider further adjustments.[16]

Included among the CORSIA Emissions Unit Criteria that ICAO uses to assess offset programs' eligibility is the 'additionality' criterion.[17] Assessing the additionality of international carbon offsets has been a fraught undertaking. There appear to be significant differences in environmental outcomes between various carbon-offset programs, and there are many standards by which additionality can be measured: a recent study of Clean Development Mechanism (CDM) offsets used in the European Union's Emissions Trading System found that up to 85 percent were not additional, yet 'multiple lines of evidence suggest' that forest offsets certified for California's carbon market result 'in additional emissions reductions, beyond reductions that would have occurred in the absence of the program.'[18] The CORSIA Emissions Unit Criteria includes other standards for environmental effectiveness, including that offset programs 'must' have measures 'in place' to avoid the double issuance, double use, and double claiming of offsets.[19]

In directing ICAO to develop environmental criteria for CORSIA offsets, the ICAO Assembly decided that 'emissions units generated from mechanisms established under the UNFCCC and the Paris Agreement are eligible for use in CORSIA, provided that they align with decisions by the Council, with the technical contribution of TAB and CAEP, including on avoiding double counting and on eligible vintage and timeframe.'[20] Experts have vigorously questioned the environmental integrity of CDM offsets, and whether their inclusion in CORSIA would lead to additional GHG abatement.[21] In its initial approval of offset programs, the ICAO Council certified CDM credits to satisfy CORSIA obligations, but restricted their use to specific vintages and timeframes.[22]

III. International Organizations' Rules As International Obligations

International law has long provided that if a state breaches a primary rule—an obligation established by a treaty or customary international law—it can be held responsible. International organizations can also be held responsible for breaching primary rules, although judicial findings to that effect have been few and far between.[23] The ILC DARIO Articles provide a structural roadmap for evaluating an organization's primary obligations, and the articles' treatment of organizational 'rules' is briefly discussed here.

The ILC DARIO Articles, Article 2, subparagraph (b) defines rules of an organization as 'the constituent instruments, decisions, resolutions and other acts of the organization adopted in accordance with those instruments, and established practice of the organization.'[24] ILC DARIO Article 10 provides that there

thought to address' international bunker fuels); Alejandro Piera, *Greenhouse Gas Emissions from Aviation: Legal and Policy Challenges* (Eleven International 2015), 42-43 (interpreting Kyoto Protocol Article 2(2)'s reference to ICAO); Baine Kerr, 'Clear Skies or Turbulence Ahead? The International Civil Aviation Organization's Obligation to Mitigate Climate Change,' 16(1) Utrecht Law Review (2020) (examining ICAO's mandate and obligation to mitigate climate change under the Chicago Convention and climate treaties).

13 ICAO Assembly Resolutions In Force (as of 8 October 2010), Doc. 9958, Resolution 37-19.

14 ICAO Assembly Resolutions In Force (as of 4 October 2013), Doc. 10022, Resolution 38-18; ICAO Assembly Resolutions In Force (as of 6 October 2016), Doc. 10075, Resolutions 39-2 and 39-3 (ICAO Resolution 39-3); Chicago Convention, Annex 16, Volume 4 (CORSIA SARP). ICAO adopted other measures to reduce GHG missions from aviation in addition to CORSIA that are not relevant to the question examined here. (Ibid.)

15 ICAO Assembly Resolutions in Force (as of 4 October 2019), Doc. 10140, Resolution 40–19 (ICAO Resolution 40-19); see (n 8).

16 ICAO Resolution 40-19, para 9(g).

17 CORSIA Offset Criteria, 2 (defining additionality).

18 Compare Cames, (n 6) with Christa Anderson et. al. 'Forest Offsets Partner Climate Change Mitigation with Conservation,' (2017) 15(7) Frontiers in Ecology 359, 361.

19 CORSIA Offset Criteria, 3.

20 ICAO Resolution 39-3, para 21.

21 Harry Fearnehough et. al. 'Discussion paper: Marginal Cost of CER Supply and Implications of Demand Sources,' German Emissions Trading Authority (January 2018), available at: www.dehst.de/EN, 26-27.

22 See (n 3).

23 Jan Klabbers, 'Reflections on Role Responsibility: The Responsibility of International Organizations for Failing to Act,' (2017) 28(4) European Journal of International Law, 1137.

24 ILC DARIO Articles, Art. 2.

'is a breach of an international obligation by an international organization when an act of that international organization is not in conformity with what is required of it by that obligation, regardless of the origin or character of the obligation concerned,' including 'the breach of any international obligation that may arise for an international organization towards its members under the rules of the organization.'[25] Thus, according to the International Law Commission (ILC), an organization's rules can impose international obligations on it, at least as between the organization and its members.

Yet, as the ILC acknowledges, the 'legal nature of the rules of the organization is to some extent controversial.'[26] It notes that there are several theories for determining whether an organization's rule constitutes international law and can thereby give rise to an international obligation. These include: that all rules of international organizations are part of international law; that no such rules are part of international law; that organizations such as the European Union which have achieved a high degree of integration are a special case; or that it depends on the source and substance of the rule, and certain administrative rules should clearly not be considered international law.[27] The ILC ultimately opines that the articles apply 'to the extent' that an obligation arising under an organization's rules is determined to be an international obligation, and '[b]reaches of obligations under the rules of the organization are not always breaches of obligations under international law.'[28]

Christiane Ahlborn critiques the ILC's approach and argues that rules of international organizations, including their constituent instruments, acts, and established practice should be considered internal 'law of the organization' rather than as part of international law. She reasons that even international organizations with broad quasi-legislative powers such as the United Nations Security Council, the World Health Organization, or ICAO, require states to act in order implement their decisions, and viewing organizations' rules as imposing international obligations is inconsistent with the idea that international organizations and their relations with their member states are autonomous and self-contained.[29] Ahlborn contends that because organizations' rules should be considered internal, the ILC DARIO Articles should not apply to determine responsibility for breaches of rules by either the organizations that made them or their member states.[30]

Arnold Pronto points out the ILC DARIO Articles' broad definition of international obligations is logical given that 'very few international organizations, if any, regulate through their rules, in a comprehensive manner, the consequences of breaches of international obligations owed to their members,' and ILC DARIO Article 64 provides that an organization can establish secondary rules of responsibility that derogate from the ILC DARIO framework.[31] Pronto notes that a distinction between international obligations and internal rules can be drawn based on the origins of the rule in question: 'rules (applied in the context of international law, i.e., an international organization) which do not have a basis in national law seemingly are part of the international legal order.'[32]

The International Court of Justice (ICJ or Court) took a similar approach of looking to the source and nature of an international organization's rule when finding that a Constitutional Framework adopted by both a domestic institution and the United Nations Mission in Kosovo (UNMIK) was part of international rather than internal law.[33] The Court noted that the Framework was part of a specific legal order to regulate Kosovo's internal affairs during the United Nation's interim administration of Kosovo. It also found the UNMIK administration combined national and international elements because the Framework was adopted by the Kosovo Assembly and was also codified by UNMIK as a regulation pursuant to authority given to it by a United Nations Security

25 ILC DARIO Articles, Art. 10.

26 ILC DARIO Articles, Commentary to Art. 10, 63; see also Christiane Ahlborn, 'The Rules of International Organizations and the Law of International Responsibility,' (2011) 8 International Organizations Law Review 403, 418 ('the legal nature of the acts of international organizations is even more controversial than that of their constituent instruments').

27 ILC DARIO Articles, Commentary to Art. 10 (citing sources).

28 ibid.

29 Ahlborn, (n 26), 403, 423-424.

30 ibid., 438-439.

31 Arnold M. Pronto, 'Reflections on the Scope of the Application of the Articles on the Responsibility of International Organizations,' in Ian Brownlie & Maurizio Ragazzi, (eds.) *Responsibility of International Organizations: Essays in Memory of Sir Ian Brownlie*, (Martinus Nijhoff 2013),157; see ILC DARIO Articles, Article 64.

32 Pronto, (n 31), 156 (citing decision by Administrative Tribunal of the International Labor Organization finding that organization's rules applied rather than national law).

33 *Accordance with International Law of the Unilateral Declaration of Independence in Respect of Kosovo*, Advisory Opinion, I.C.J. Reports 2010 (*Kosovo Advisory Opinion*), 403, paras 88–89.

Council resolution. Noting UNMIK's broad authority to administer Kosovo, and the Framework's binding character, the Court concluded that the Framework and resolution together 'constituted the international law applicable to the situation prevailing in Kosovo.'[34]

The Court's *Kosovo Advisory Opinion* thus demonstrates the 'permeability' between internal organizational rules and international law.[35] As Lorenzo Gasbarri argues, such rules appear to have a 'dual nature,' as internal and international, specific and general.[36] This article acknowledges that dual nature by evaluating the existence of ICAO's additionality rule and its legal character from a functionalist perspective that examines the nature and source of the rule itself.[37]

IV. ICAO's Additionality Rule For CORSIA-Certified Offsets

Four ICAO documents relate to its establishment of CORSIA and the additionality of carbon offsets that ICAO certifies: ICAO Assembly Resolutions 39-2 and 39-3; the CORSIA SARP, adopted by the ICAO Council; and the CORSIA Offset Criteria, which is referenced in the CORSIA SARP and was also adopted by the ICAO Council. As discussed here, taken together, these 'decisions, resolutions, and other acts'[38] of ICAO create an additionality rule that oblige ICAO to only certify offsets for use in CORSIA that mitigate GHG emissions beyond what would otherwise occur.

1. ICAO Actions Establishing CORSIA and Requiring the Additionality of Offsets Used to Satisfy CORSIA Obligations

ICAO Assembly Resolution 39-2, adopted in 2016, is entitled 'Consolidated statement of continuing ICAO policies and practices related to environmental protection – Climate change.' It re-restates ICAO's post-2020 carbon neutral growth goal established in previous ICAO Assemblies.[39] And, as with prior Assembly resolutions, the Annex to Resolution 39-2 sets forth guiding principles for the design and implementation of a market-based mechanism (MBM), which include that 'MBMs should support the mitigation of GHG emissions from international aviation,' and also provides that 'MBMs should facilitate appropriate access to all carbon markets.'[40]

Concurrently with ICAO Assembly Resolution 39-2, the ICAO Assembly adopted Resolution 39-3, 'Consolidated statement of continuing ICAO policies and practices related to environmental protection – Global Market-based Measure (MBM) scheme.' This resolution sets forth detailed requirements for CORSIA's design and implementation.[41] It provides that CORSIA will be phased in over a period of years in order to accommodate the different capabilities of states and prevent market disruption.[42] It contains complex formulae relating to how GHG emissions are counted and what percentage of emissions must be offset, which varies according to each airline operator.[43] The resolution 'notes the work of the Council' and its Committee on International Aviation Environmental Protection with regard to emissions unit criteria, and requests that this work be expedited so CORSIA can be fully implemented in 2020.[44]

With regard to the environmental integrity of CORSIA-certified offsets, Resolution 39-3 'decides' that CORSIA should have safeguards to prevent 'inappropriately' burdening international aviation, and requests that the Council set criteria for such safeguards.[45] The resolution requests that the Council adopt Standards and Recommended Practices (SARPs) and related guidance material 'to support

34 ibid., para 91; Ahlborn and others have criticized the Court's reasoning and result. (See Ahlborn, (n 26), 460 n. 232 (citing D. Jacobs, 'The Kosovo Advisory Opinion: A Voyage by the ICJ into the Twilight Zone of International Law' The Hague Justice Portal (12 October 2010), www.haguejusticeportal.net/eCache/DEF/12/131.html accessed 9 December 2020.

35 Lorenzo Gasbarri, 'The Dual Legality of the Rules of International Organizations,' (2014) 14(1) International Organizations Law Review 87, 97 (citing Joost Pauwelyn, *Conflict of Norms in Public International Law: How WTO Law Relates to Other Rules of International Law* (Cambridge University Press, 2003)).

36 ibid.

37 See ibid. (citing Jan Klabbers, 'The EJIL Foreword: The Transformation of International Organizations Law' (2015) 26(1) European Journal of International Law 9.)

38 ILC DARIO Articles, Article 2(b) (defining 'rules' of an organization).

39 ICAO Resolution 39-2, para 6.

40 ibid., Annex.

41 ICAO Resolution 39-3.

42 ibid, para 9.

43 ibid, para 9-11.

44 ibid, para 15.

45 ICAO Resolution 39-3, para 17.

the purchase of appropriate emissions units by aircraft operators under the scheme, taking into account relevant developments in the UNFCCC and Article 6 of the Paris Agreement.'[46] The resolution also requests that the Council 'oversee the functioning of CORSIA.'[47]

The ICAO Council adopted the CORSIA SARP in June 2018 with an applicable date of January 1, 2019.[48] Citing its authority to set standards for international aviation under Articles 37, 54, and 90 of the Chicago Convention, the Council established detailed technical rules for CORSIA, including: its administration; monitoring and verification requirements for airline operators that establish the quantity of emissions that operators must offset; and the use of 'CORSIA fuels' by operators to reduce offsetting requirements.[49] The CORSIA SARP provides that the Council will decide what offset providers are eligible, and incorporates the CORSIA Emissions Unit Criteria by reference, providing: 'The CORSIA Eligible Emissions Units are only those units described in the ICAO document entitled "CORSIA Emission Units," which meet the CORSIA Emissions Unit Eligibility Criteria contained in the ICAO document entitled "CORSIA Emissions Unit Eligibility Criteria."'[50] The SARP further establishes rules for how the purchase of offsets are reported to ICAO: operators are to submit reports on the offsets purchased to their flag states; and states are then required to submit the same reports to ICAO.[51]

The ICAO Council adopted the CORSIA Offset Criteria referenced in the CORSIA SARP in March 2019; only the Council can amend the Criteria.[52] The criteria consist of eight integrity assessment standards, including the criterion for additionality, which states:

> Carbon offset programs must generate units that represent emissions reductions, avoidance, or removals that are additional. Additionality means that that the carbon offset credits represent greenhouse gas emissions reductions or carbon sequestration or removals that exceed any greenhouse gas reduction or removals required by law, regulation, or legally binding mandate, and that exceed any greenhouse gas reductions or removals that would otherwise occur in a conservative, business-as-usual scenario.[53]

In addition, baselines for additionality must be measured based on a 'conservative 'business as usual' emissions trajectory.'[54] The CORSIA Offset Criteria states that ICAO 'should' assess eligibility criteria at a program level because 'the expertise and resources needed to develop and implement ICAO emissions criteria at a methodology and project level is likely to be considerable.'[55]

2. ICAO's Actions as Constituting an 'Additionality Rule'

The foregoing ICAO Assembly Resolutions, CORSIA SARP, and CORSIA Offset Criteria arguably oblige ICAO to only certify offset programs where those programs' offsets are 'additional'—as that concept is defined in the CORSIA Offset Criteria—because resolutions and acts of an organization are 'rules of the organization' that bind international organizations under the ILC DARIO Articles.[56] As discussed here, these documents demonstrate that there is an additionality rule, and also indicate that there is no disagreement among ICAO's organs as to the existence of that rule.

Resolution 39-2 states that MBM's should mitigate GHG emissions;[57] without additionality, an offset program would fail to do so.[58] Similarly, Resolution 39-3, by providing calculations for how airline operators' emissions 'required to be offset through CORSIA,' indicates that reductions represented by offsets must actually occur.[59] The CORSIA SARP referenced the ICAO Council's authority to establish standards for international aviation, and states that the 'aeroplane operator shall meet its offsetting re-

46 ibid, para 19.

47 ibid, para 19.

48 CORSIA SARP, para 2-3.

49 ibid.

50 ibid., section 4.2.1.

51 ibid., section 4.3 and Appendices 5 and 6.

52 CORSIA Offset Criteria, 1-2.

53 ibid., 2

54 CORSIA Offset Criteria, 3.

55 ibid., 2.

56 ILC DARIO Articles, Art. 2(b).

57 ICAO Assembly Resolution 39-2, Annex.

58 Joelle De Sepibus, 'The CDM: A Critique of Its Environmental Integrity,' in Michael Mehling, Amy Merrill, Karl Upston-Hooper, (eds.) *Improving the Clean Development Mechanism: Options and Challenges post-2012*, (Brill 2011), 10 (additionality standard is core requirement for offsets' environmental effectiveness).

59 ICAO Assembly Resolution 39-3, para 11.

quirements . . . only' through 'emissions units' approved by the ICAO Council according to the CORSIA Offset Criteria.[60] The CORSIA Offset Criteria blends mandatory and discretionary terms, stating that ICAO 'should' implement the additionality criterion at the program level, but that offset programs included in CORSIA 'must' generate units that are additional based on a conservative baseline.[61]

As official resolutions and acts, these documents form part of ICAO's 'rules' under the ILC DARIO Articles.[62] Organizational rules do not necessarily have the same status under the Articles, although in general, rules may not derogate from constituent instruments.[63] Here, the legal status of the CORSIA Offset Criteria is strengthened by its incorporation into the CORSIA SARP: SARPs are designated as Annexes to the Chicago Convention 'for convenience;' and although not technically amendments to the Convention, they have a relatively more formal position than other organizational acts.[64]

It could be argued that aspects of the ICAO Assembly resolutions indicate that the Assembly intended for the ICAO Council to exercise a political rather than technical assessment as to what offset programs are certified: Resolution 39-2 states that CORSIA should ensure access to 'all carbon markets as appropriate;' and Resolution 39-3 calls for 'safeguards' to protect international aviation from an 'inappropriate burden' caused by CORSIA. But, both statements are both qualified with the word 'appropriate,' indicating that the Assembly expected the Council to exercise judgment.[65] And, the Assembly resolutions also state that the purpose of CORSIA is the mitigation of GHG emissions, which would be frustrated if the ICAO Council did not apply the CORSIA Offset Criteria's environmental integrity principles.

Does the CORSIA Offset Criteria's statement that the ICAO Council 'should' apply the criteria at the program level render the criteria discretionary rather than mandatory? That term should be read in context of the CORSIA SARP and Assembly resolutions, which articulate CORSIA's purpose of reducing emissions, and in light of the Criteria's clear and mandatory statement that programs 'must generate units that represent emissions reductions, avoidance, or removals that are additional,' and 'must be based on a realistic and credible baseline.'[66] In the view of this author, the CORSIA SARP, Assembly Resolutions, and Offset Criteria indicate that ICAO has an 'additionality rule' requiring that offsets it certifies for use in CORSIA reduce GHG emissions beyond what would have otherwise occurred notwithstanding the Criteria's use of the word 'should.'[67] And, importantly, this is not the only environmental integrity rule that applies to ICAO's offset certification decisions, as the Criteria also requires that ICAO certify programs that have measures 'in place' to ensure that reductions represented by offsets 'are only counted once towards a mitigation obligation.'[68]

There does not appear to be any disagreement as to such a rule among ICAO's organs. The ICAO Assembly repeatedly referred to the ICAO Council's promulgation of a SARP in order to achieve CORSIA, and also referred to the Council's application of emissions unit criteria to ensure offsets' environmental integrity.[69] Given that the ICAO Assembly and ICAO Council have different roles, ICAO's apparent 'inter-institutional' harmony related to CORSIA indicates the organs' shared view on the importance of CORSIA's environmental integrity and offsets' additionality, and supports the idea that the rule applies to ICAO as an organization with independent legal personality capable of bearing legal obligations.[70]

Alejandro Piera questions whether ICAO Assembly resolutions and ICAO Council SARPs are the most legally legitimate way to establish an ICAO MBM, and suggests that a new international treaty might

60 CORSIA SARP, section 4.2.1.

61 CORSIA Offset Criteria, 2.

62 See ILC DARIO Articles, Art. 2(b).

63 ILC DARIO Articles, Commentary to Article 2, para 19.

64 Chicago Convention, Art. 54(l); see Peter 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).

65 See Christopher Ford, 'Judicial Discretion in International Jurisprudence: Article 38(1)(c) and General Principles of Law,' 5 Duke Journal of Comparative and International Law 35 (1994), 71-72 (discussing relationship between exercise of discretion and notions of propriety).

66 The interpretative maxim '*noscitur a sociis*' has 'received some degree of recognition in the jurisprudence and literature of international law.' (Lord McNair 'General Words and Special Words: The Ejusdem Generis Doctrine: Expressio Unius Est Exclusio Alterius' in *The Law of Treaties* (Oxford 1986), 393.)

67 ILC DARIO Articles, Article 2(b).

68 CORSIA Emissions Unit Criteria, 3-4.

69 ICAO Assembly Resolution 39-3, para 17, 19, 21.

70 Cf. Benedict Kingsbury & Lorenzo Casini, 'Global Administrative Law Dimensions of International Organizations Law,' 6 International Organization Law Review 319 (2009), 337 (describing 'turf battles' within the United Nations between the General Assembly and Security Council).

be a slower but sounder way to proceed.[71] Piera notes that SARPs have never been used to regulate economic matters, and that, because SARPs are not directly enforceable by ICAO, ICAO's oversight of states' compliance with SARPs through audits would need to encompass states' adherence with an MBM.[72] He also questions whether an ICAO Assembly resolution would be adequate to establish CORSIA's enforceability against ICAO's member states, reasoning that under the Chicago Convention, such resolutions are non-binding.[73]

Piera's concerns, while well placed, are not relevant to the question examined here. Because both the ICAO Assembly and the ICAO Council created the additionality rule, the institutional hierarchy between Assembly resolutions and ICAO Council decisions is not at issue.[74] And this article examines the binding nature of the additionality rule on ICAO, and potential implications of ICAO not adhering to the rule, not the rule's ramifications for ICAO's member states.[75]

V. The Legal Character of ICAO's Additionality Rule as an International Obligation

Having established the existence of the additionality rule, this article now examines its legal character. Drawing on the ILC DARIO Articles, the ILC's commentary, and the scholarly positions discussed in section I, it finds the additionality rule should not be viewed as a mere administrative regulation, but instead imposes an international obligation on ICAO. This analysis is based on four factors: the nature of the rule, which although technical is essential to CORSIA's success at mitigating climate change; its legal context, which includes ICAO's role as a 'lawmaking' organization; the unique structure of CORSIA, whereby states entrusted ICAO as a gatekeeper for the scheme's environmental integrity; and the lack of any specialized secondary rule that would provide an avenue to assess ICAO's responsibility for meeting its obligation.

The central role of the additionality rule in CORSIA's success as a climate change mitigation measure indicates that it is more than an 'administrative regulation.'[76] The rule does not relate to ICAO's administration as an organization—as would a rule regulating ICAO's personnel or day-to-day functioning—but to ICAO's administration of a specific program, CORSIA. And without the rule, CORSIA would likely be ineffective at mitigating climate change because airline operators could continue polluting while paying for reductions that would have occurred anyway.[77] Thus, in contrast to an administrative regulation, the additionality rule has international implications beyond ICAO's internal functioning.

The legal context of the additionality rule also supports its classification as an international obligation. The rule was created by ICAO as part of its effort to limit GHG emissions from international aviation, and thus has an 'international character' because it was created by and for an international organization, and has no basis in national law.[78] It does not apply to ICAO's member states, nor does it require any direct implementation on the part of those states—rather, ICAO decides what offset programs can participate in CORSIA, and states are obliged to register and offset their emissions through CORSIA.[79]

Under the ICJ's reasoning in its *Kosovo Advisory Opinion*, the additionality rule constitutes an international obligation. Like the Constitutional Framework at issue in that case, international organs adopted CORSIA: the ICAO Assembly and ICAO Council. And ICAO functions as a 'lawmaking organization.'[80] Such organizations have varying degrees of autonomy and will separate from their members based on

71 Piera (n 12), 337; see also Brian F. Havel and Gabriel S. Sanchez, 'Toward a Global Aviation Emissions Agreement' 36 Harvard Environmental Law Review 352 (2012) 359-360 (questioning enforceability of GHG emissions limitations through SARPs).

72 Piera (n 12), 338.

73 ibid. 340.

74 See ILC DARIO Articles, Commentary to Article 2, para 21 (defining a 'rule' of an organization may require consideration of a hierarchy among different kinds of rules depending on the organization).

75 See CORSIA SARP, section 4.2.1.

76 ILC DARIO Articles, Commentary to Article 10, para 5 (differentiating between international obligations and administrative regulations).

77 See De Sepibus (n 58).

78 See Pronto (n 31), 156 (looking to source of rule to determine its character).

79 Cf. Ahlborn (n 26), 424 (quasi-legislative decisions by international organizations can still be considered as internal because member state implementation is required.)

80 Nigel G. White, 'Lawmaking,' in *The Oxford Handbook of International Organizations*, Jacob Katz Cogan, Ian Hurd, and Ian Johnstone (eds.) (Oxford University Press 2016), 561; see *Kosovo Advisory Opinion*.

various factors, including 'the presence of majority voting in the organs; the breadth of the purposes of the organization; the intrusiveness of the powers of the organs; the nature of decision-making; and the nature of membership.'[81] ICAO has a high degree of autonomy and will under these factors: the ICAO Council adopts SARPs with two-thirds votes; ICAO has a broad purpose of the safe and orderly development of international aviation; its decisions on aircraft design and operation function as hard law for airspace over the high seas and as particularly potent law for national airspace; and it has nearly universal membership.[82]

And like UNMIK, CORSIA is a *sui generis* international scheme. ICAO's member states conferred authority on the ICAO Council to create and regulate an international market with nearly universal membership among sovereign states that is intended reduce costs of achieving an 'environmental good'—the reduction of GHG emissions from international aviation.[83] The environmental integrity of that market requires the additionality rule, which has been and will be applied by ICAO to evaluate offset programs that directly interact with private parties and local populations. Thus, CORSIA reaches beyond the confines of a specific legal order, suggesting that one of its central environmental standards should be considered an international obligation rather than an internal rule.[84]

Moreover, as Pronto points out, the rationale for the ILC DARIO Articles' inclusion of 'rules of an organization' as potential international obligations makes sense because few international organizations have internal procedures for assessing their responsibility.[85] ICAO has no specialized secondary rule governing the consequences for a potential breach of the CORSIA Offset Criteria by the ICAO Council or TAB within the meaning of ILC DARIO Article 64, such as an internal accountability mechanism.[86] Thus, at least with regard to ICAO's responsibility for the additionality rule, it is not necessarily the case that ICAO's member states fully relinquished 'their *facultés* under general international law, for the benefit of special procedures to which they have a particular commitment.'[87] Rather, the only procedures for remedying a violation would be through the ICAO Assembly and the ICAO Council, and would be general and political rather than specific and legal.[88] Moreover, classifying international organizations' rules such as the additionality rule as international obligations promotes a unitary system of international law.[89] Accordingly, the additionality rule can be construed as an international obligation. And an act by ICAO's organs in breach of that obligation could be attributed to ICAO under international law, and would be governed by the law of international responsibility as represented in the ILC DARIO Articles.[90]

VI. Assessing and Enforcing ICAO's Compliance With the Additionality Rule

Before the additionality rule was adopted by ICAO, scholars speculated that ICAO would face significant pressure to certify offset programs for CORSIA based on political rather than environmental considerations, and noted that Brazil and China wanted the emissions unit criteria applied nationally rather than by the ICAO Council.[91] Now that the additionality rule is in place and is being applied by ICAO's TAB and Council, it is possible to assess whether ICAO is complying with it. Such an analysis is beyond the scope of this article. Instead, this section reflects on potential standards for measuring ICAO's compliance with its obligation, and the role that the law of

81 White (n 80) 562; see also Jan Klabbers, 'Autonomy, Constitutionalism, and Virtue in International Institution Law,' in Richard Collins and Nigel D. White (eds.) *International Organizations and the Idea of Autonomy*, (Routledge 2011), 122 (autonomy in the context of international organizations is the ability to act without hindrance).

82 See White (n 80) 565 (noting ICAO's broad authority); Ahlborn (n 26) 423 (same).

83 Bruce A. Ackerman and Richard B. Stewart, 'Reforming Environmental Law,' (1985) 37 Stanford Law Review 1333, 1341-1351 (discussing MBM's potential to reduce the cost of providing environmental goods).

84 Cf. Jacobs (n 26) (criticizing *Kosovo Advisory Opinion* for characterizing Constitutional Framework as both part of a specific legal order and as part of international law).

85 Pronto (n 31) 157.

86 See F.R. Jacur, 'Paving the Road to Legitimacy for CDM Institutions and Procedures,' 1 Carbon and Climate Law Review (2009) 76-77 (discussing accountabilty mechanism at World Bank institutions as template for Clean Development Mechanism).

87 Ahlborn (n 26) 438-439.

88 See Piera (n 12) 92 (discussing political dynamics between ICAO Assembly and ICAO Council).

89 Andre Nollkaemper, 'Constitutionalization and the Unity of the Law of International Responsibility,' (2009) 16(2) Indiana Journal of Legal Studies 535, 552 (law of international responsibility traditionally seen as unitary system).

90 See ILC DARIO Articles, Article 6(1).

91 Lyle (n 5) 6.

international responsibility can play in providing accountability even in the absence of a judicial remedy.

A threshold question in determining whether ICAO's conduct breaches the obligation discussed in this article is if the additionality rule imposes an obligation of conduct or result.[92] Theoretically, ICAO could breach its obligation if it fails to use its best efforts to make sure CORSIA offsets are additional, or if CORSIA offsets do not reduce emissions beyond what they would otherwise be.[93] The obligation could encompass both types of wrongful acts, as the categories are not necessarily exclusive.[94] And, as discussed in section IV above, the additionality rule provides both that ICAO should implement the additionality criterion in order to mitigate international aviation's climate impact, and that offset programs must generate additional emissions reductions, avoidance, or removals. But it may be more pragmatic to assess any breach by ICAO on the diligence of its efforts to implement the rule, in other words, based on its conduct, rather than whether CORSIA offsets actually mitigate climate change, because proving additionality or the lack thereof is methodologically difficult.[95]

Construing the additionality rule as an obligation of conduct does not lessen its importance. As Benoit Mayer points out, such obligations can be breached regardless of whether the desired result is achieved.[96] Accordingly, if ICAO approves a program for use in CORSIA where there was evidence that additional GHG emissions reductions, avoidance, or removal would not occur, the obligation could be theoretically be violated regardless of whether the offsets in question turn out to be environmentally effective.[97] And a failure to respond to new evidence could likewise run afoul of the obligation given that CORSIA Emissions Unit Criteria are not limited to ICAO's program certification, but appear to impose an ongoing additionality requirement.[98] Thus, assessing ICAO's compliance with its obligation would be fact-dependent, and turn on how the organization reaches decisions in light of the information before it.[99]

Assuming ICAO could be shown to be in breach of its obligation, the practical relevance of the law of international responsibility may be indirect. While acknowledging it has a constitutional role of ensuring compliance with law as well as its traditional function of reparation for injury, scholars question the law of international responsibility's importance for international organizations because absent specific arrangements, there are no third party dispute resolution mechanisms that can bind them.[100] Even though ICAO's constituent treaty provides a detailed framework for dispute resolution with the possibility of appeal to international arbitration, by its terms that process applies between state parties, not ICAO and its member states.[101] Thus, judicial review of ICAO's compliance with its additionality rule would likely require overcoming jurisdictional and immunity challenges in national courts.[102]

The law of international responsibility can nevertheless play an important part in holding ICAO to account by shaping discourse about the legality of its conduct.[103] Kristina Daugirdas explains how transnational actors can use the ILC DARIO Articles to bolster their positions because they offer 'a detailed,

92 See ILC DARIO Articles, Commentary to Article 10, para 11 (organizations can hold various types of obligations); Pierre Dupuy, 'Reviewing the Difficulties of Codification: On Ago's Classification of Obligations of Means and Obligations of Result in Relation to State Responsibility,' (1999) 10(1) European Journal of International Law 371, 382 (classification of obligations useful to assess wrongful acts giving rise to responsibility, although 'certain concrete situations will never fall into one category or the other').

93 Benoit Mayer, 'Obligations of Conduct in the International Law on Climate Change: A Defence,' (2018) 27 RECIEL 130, 130 (reviewing difference between obligations of conduct and result).

94 'Draft Articles on Responsibility of States for Internationally Wrongful Acts, with commentaries,' International Law Commission, *Yearbook of the International Law Commission, 2001*, Vol. II, Part Two, UN Doc. A/56/10, Commentary to Art. 12, para 11 (citing *Gabcikovo-Nagymaros Project (Hungary/Slovakia)*, Judgment, I.C.J. Reports 1997, 77, para 135.

95 See Cames (n 6) 20.

96 Mayer (n 93) 137-138.

97 ibid. 136 (obligations of conduct require obligation holder to make its best efforts toward achieving a result).

98 CORSIA Emissions Unit Criteria, 3 ('carbon offset programs must generate units that represent emissions reductions, avoidance, or removals that are additional').

99 Mayer (n 93) 139 ('establishing the breach of an obligation of conduct requires an assessment of the measures taken . . . based on the means and information available to that person at the relevant time').

100 Nollkaemper (n 89) 544-545; Kristina Daugirdas, 'Reputation and Responsibility of International Organizations,' (2014) 25(4) European Journal of International Law 991, 992; Klabbers (n 23) 1160.

101 Chicago Convention, Art. 84-86.

102 See Ernestine Meijer, 'The International Institutions of the Clean Development Mechanism Brought Before National Courts: Limiting Jurisdictional Immunity to Achieve Access to Justice,' (2007) 39 International Law and Politics 873; Christina Voigt, 'Responsibility for Environmental Integrity of the CDM: Judicial Review of Executive Board Decisions,' David Freestone and Charlotte Streck (eds.) *Legal Aspects of Carbon Trading* (Oxford University Press 2009), 278-279.

103 Daugirdas (n 100) 993-994.

readily accessible, and ostensibly neutral set of rules that specify when [international organizations] are responsible for violations of international law.'[104] Thus, governments and non-governmental organizations have cited the Articles to support claims and counter international organizations' positions in multilateral fora, national courts, and in diplomatic interactions.[105] International organizations are likely to heed such discourse because a 'reputation for complying with international law is an important facet' of an international organization's legitimacy.[106]

ICAO's legitimacy is salient here. In 2019, the ICAO Assembly adopted an 'exclusivity clause,' where it 'determined' that CORSIA 'is the only global market-based measure applying to CO2 emissions from international aviation in order to avoid a possible patchwork of duplicative state or regional MBMs.'[107] ICAO acted in response to what Natalie Dobson describes as the European Union's 'ultimatum strategy' of threatening and taking unilateral actions to catalyze and steer multilateral action to reduce GHG emissions from international aviation and shipping.[108] The Union's strategy includes an upcoming review of CORSIA that will examine the 'overall environmental integrity of the global market-based measure.'[109] Thus, assessments of ICAO's compliance with international law—including its additionality rule—could form part of a legal discourse on ICAO's role as the regulator of international aviation's climate impacts, and thereby provide accountability for ICAO's conduct.

VII. Conclusion

ICAO acted to mitigate climate change by requiring the growth in international aviation's GHG emissions beyond 2019 levels to be offset. Through ICAO Assembly Resolutions, the CORSIA SARP, and the CORSIA Emissions Unit Criteria, ICAO established an 'additionality rule' that offset programs it certifies for use in CORSIA must generate offsets that represent emissions reductions, avoidance, or removals exceeding those required by law, or that would have occurred anyway as measured against a hypothetical baseline. Although scholars disagree about whether international organizations' rules are part of international law under the ILC DARIO articles, the additionality rule's central role in ensuring CORSIA's effectiveness, its external relevance, and ICAO's high degree of institutional autonomy support classifying it as an international obligation.

ICAO's compliance with the additionality rule can be assessed on the basis of whether it diligently endeavours to ensure offsets' additionality based on the information before it. Although there are limited possibilities for judicial review for such an assessment, ICAO can be held to account through legal discourse and in other fora. Compliance with international law is an important part of international organizations' legitimacy, and the prospect of unilateral actions regulating aviation's climate impacts heightens the need for ICAO to maintain its legitimacy by upholding its international legal obligations, including the additionality rule.

104 ibid.

105 ibid. 1000-1006.

106 ibid. 993.

107 ICAO Resolution A40-19, para 18. See Natalie Dobson, 'Competing Climate Change Responses: Reflections on EU Unilateral Regulation of International Transport Emissions in Light of Multilateral Developments,' (2020) 67 Netherlands International Law Review 183, 189.

108 ibid.

109 ibid., see Parliament and Council (EU) Regulation 2017/2392 of 13 December 2017 amending Directive 2003/87/EC to continue current limitations of scope for aviation activities and to prepare to implement a global market-based measure from 2021 [2017] OJ L 350/13.