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ORIGINAL ARTICLE

Diplomatic Challenges for the EU and China in the Era of CORSIA

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Abstract

Civil aviation has expanded in recent years, and the sector's greenhouse gas (GHG) emissions have grown rapidly, which accounts for 2-3 percent of global CO₂ emissions. The EU has taken the lead in addressing aviation emissions to cover aviation sectors in the EU ETS. Meanwhile, at the international level, the International Civil Aviation Organization (ICAO) adopted the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA). This article examines the diplomatic challenges that the EU and China will face because of their different responses to CORSIA. The EU has introduced CORSIA to its aviation ETS, while China has not participated in CORSIA and opposes its unified climate target, baseline, and mechanism. The main future challenge for the EU will arise if and when the EU decides to extend its ETS to non-EEA flights from 2027 onwards to countries that refuse to use CORSIA, as this would (1) be inconsistent with the "anti-duplication clause" of ICAO Assembly Resolution A40-19 and (2) constitute an extraterritorial application of EU rules to other jurisdictions, which risks being perceived as a violation of the sovereignty of a third country. In addition, the EU Aviation ETS Directive may also raise the issues of minimum harmonisation and regulatory differentiation within the EU itself. China, on the other hand, has tried to establish its own ETS with the major diplomatic challenge for China being its deviation from the MRV requirements of CORSIA.

Introduction

Aviation contributes to anthropogenic climate change.¹ Civil aviation has expanded in recent years, and the sector's greenhouse gas (GHG) emissions have grown rapidly,² which accounts for 2–3 percent of global CO₂ emissions.³ Aviation GHG emissions are released at cruise altitudes, contributing to additional climatic forcing and surface warming.⁴ It is suggested that aviation's total climate impact is at least twice that of CO₂ alone.⁵

The European Union has taken the lead in addressing aviation emissions. As early as 2008, the European Parliament and the Council enacted Directive 2008/101/EC, which extended the EU Emissions Trading System (ETS) to aviation. The Directive covered all operators that manage flights departing from or arriving in the European Economic Area (EEA) airports from 2012 onward.⁶ All operators, domestic or foreign, that run flights to or from the EEA and fall under Annex 1 of the EU ETS Directive must comply with the EU ETS.⁷ This means that these operators are obligated to surrender allowances for flights which depart from or arrive at EEA airports.⁸ Importantly, covered aviation operators must also

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1. Janina Scheelhaase, Sven Maertens, and Wolfgang Grimme, "Options for Improving the EU Emissions Trading Scheme (EU ETS) for Aviation," *Transportation Research Procedia* 59 (2021): 194.

2. D. S. Lee, D. W. Fahey, A. Skowron, M. R. Allen, U. Burkhardt, Q. Chen, S. J. Doherty, *et al.*, "The Contribution of Global Aviation to Anthropogenic Climate Forcing for 2000 to 2018," *Atmospheric Environment* 244 (2021): 117834.

3. Council of the European Union, "Proposal for a Directive of the European Parliament and of the Council amending Directive 2003/87/EC regarding aviation's contribution to the Union's economy-wide emission reduction target and appropriately implementing a global market-based measure – Letter to the Chair of the European Parliament Committee on the Environment, Public Health and Food Safety (ENVI)," 6215/23, February 8, 2023, chapeau art 2a, <https://data.consilium.europa.eu/doc/document/ST-6215-2023-INIT/en/pdf>.

4. David W. Fahey and David S. Lee, "Aviation and Climate Change: A Scientific Perspective," *Carbon & Climate Law Review* 10, no. 2 (2016): 104.

5. Council of the European Union, "Proposal for a Directive of the European Parliament and of the Council amending Directive 2003/87/EC"

6. European Parliament and Council, "Directive 2008/101/EC of the European Parliament and of the Council of 19 November 2008 amending Directive 2003/87/EC so as to include aviation activities in the scheme for greenhouse gas emission allowance trading within the Community (Text with EEA relevance)," OJ L 8, *January 13, 2009*, 5, <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32008L0101>.

7. The EU ETS Directive Annex I set a list of exemptions from the EU ETS, such as "small" aircraft, "small" and "non-commercial" operators, certain flights under the rules of public service obligations (PSO), and governmental, military, search & rescue, firefighting, humanitarian, and medical service flights as well as circuit, VFR, training and research, check and testing flights, and flights from aerodromes situated in Switzerland to aerodromes situated in the EEA.

8. Christina Voigt, "Up in the Air: Aviation, the EU Emissions Trading Scheme and the Question of Jurisdiction," *Cambridge yearbook of European legal studies* 14 (2012): 476.

9. *Ibid.*

10. *Ibid.*

11. U.S. Government Accountability Office, Aviation and Climate Change: Aircraft Emissions Expected to Grow, but Technological and Operational Improvements and Government Policies Can

account for emissions released over third countries' airspace.⁹

The extension of the EU ETS to aviation was strongly opposed by several countries, including the U.S., China, Russia, and India, as a violation of the principle of state sovereignty.¹⁰ For example, based on the U.S. position, extending the EU aviation ETS to international airlines violates its sovereignty over the airspace over its territory, protected by the Chicago Convention.¹¹ Furthermore, the International Civil Aviation Organization (ICAO) has also started discussing the establishment of a global market-based approach to control GHG emissions from aviation.¹² ICAO and its member states would cooperate to achieve a collective medium-term global aspirational goal of maintaining the global net CO₂ emissions from international aviation by 2020 at the same level.¹³ The objections to the EU ETS's extension to aviation and the activities of ICAO proved effective. Specifically, the EU took the "stop the clock" decision after the ICAO Council finished its very positive discussions on the establishment of a global market-based approach to controlling GHG emissions from international aviation.¹⁴ This was because the EU was prepared to cooperate in the development of an effective international framework to regulate GHG emissions from international aviation.¹⁵ Based on the "stop the clock" decision, the EU temporarily limited the scope of the EU ETS to exclude operators that run flights departing from or arriving in extra-EEA countries.¹⁶ Furthermore, the "stop the clock" decision was extended twice to the end of 2023.¹⁷

In 2016, ICAO adopted the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA), which is a carbon offsetting and reduction scheme intended to lower CO₂ emissions from international aviation to reduce the industry's overall impact on climate change.¹⁸ CORSIA operates in the following phases: a voluntary pilot phase (2021–2023), a voluntary first phase (2024–2026), and subsequent mandatory phases starting with the second phase (2027–2035).¹⁹

The world's major emitters responded differently to CORSIA. In total, 115 nations have decided to join CORSIA as of January 2023.²⁰ EU Member States participate in the CORSIA pilot phase, and the EU proposed to amend its climate law rules to appropriately implement the global market-based measures (MBMs) within the EU ETS framework.²¹ In contrast, China, albeit an early supporter of the CORSIA plans, declined to join.²² This seems to be the case throughout the voluntary CORSIA period (2023–2027), but after that point, China's position is still unclear. In principle, participation is mandatory. China, however, disagrees with CORSIA for several important reasons.²³ It is unlikely that they can be resolved unless CORSIA is fundamentally overhauled.

This article examines the diplomatic challenges that the EU and China will face as a result of their different responses to CORSIA. This article is structured as follows: Part 2 describes the different stands and responses of the EU and China to CORSIA. Part 3 discerns and analyses the potential diplomatic challenges of the EU based on its scheme for incorporating CORSIA into the proposed aviation EU ETS. Part 4 examines the major diplomatic challenges facing China in the era of CORSIA. Part 5 concludes and highlights the main findings.

The Different Responses of the EU and China toward CORSIA

The Response of the EU to CORSIA

The EU is dedicated to reducing GHG emissions. It established the European Green Deal and proposed the "Fit for 55" legislative package, which encompasses several policy initiatives, to set the EU on the path to a green transition and reduce emissions by 2030 by at least 55 percent with the ultimate goal of

Help Control Emissions, GAO-09-554 (Washington, DC, 2009), 58, accessed 5 August, 2023, <https://www.gao.gov/assets/gao-09-554.pdf>.

12. “Market-Based Measures,” ICAO, accessed December 3, 2022, https://www.icao.int/environmental-protection/Pages/market-based-measures_old.aspx.

13. International Civil Aviation Organization, “Resolution A38-18: Consolidated Statement of Continuing ICAO Policies and Practices related to Environmental Protection – Climate Change,” Doc 10022, October 4, 2013, I-70, chapeau para 35, <https://www.icao.int/meetings/glads-2015/documents/a38-18.pdf>.

14. “Commission Proposes to ‘Stop the Clock’ on International Aviation in the EU ETS Pending 2013 ICAO General Assembly,” European Commission, accessed April 19, 2023, https://climate.ec.europa.eu/news-your-voice/news/commission-proposes-stop-clock-international-aviation-eu-ets-pending-2013-icao-general-assembly-2012-11-12_en.

15. *Ibid.*

16. “Stopping The Clock of ETS And Aviation Emissions Following Last Week’s International Civil Aviation Organisation (ICAO) Council,” European Commission, accessed October 2, 2022, https://ec.europa.eu/commission/presscorner/detail/en/MEMO_12_854.

17. The European Parliament and the Council, “Regulation (EU) No 421/2014 of the European Parliament and of the Council of 16 April 2014 amending Directive 2003/87/EC establishing a scheme for greenhouse gas emission allowance trading within the Community, in view of the implementation by 2020 of an international agreement applying a single global market-based measure to international aviation emissions (Text with EEA relevance),” OJ L129, April 30, 2014, 3, <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014R0421>; The European Parliament and the Council, “Regulation (EU) 2017/2392 of the European Parliament and of the Council 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,” OJ L 350, December 29, 2017, 9, <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32017R2392>.

18. “ICAO Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) — Frequently Asked Questions (FAQs),” ICAO, accessed April 18, 2023, https://www.icao.int/environmental-protection/CORSIA/Documents/CORSIA_FAQs_Update_9Aug18.pdf.

19. *Ibid.*

20. “ICAO CORSIA States for Chapter 3 State

reaching climate neutrality by 2050. In the “Fit for 55” packages, the EU proposed to revise the EU ETS Directive in July 2021 to also incorporate CORSIA.²⁴

In June 2022, the European Parliament and the Council of the European Union (hereinafter “the EU Council”) both agreed on their positions on the European Commission’s proposal.²⁵ After the European Parliament and the EU Council’s positions were adopted, the first inter-institutional trilogue on the EU aviation ETS was held on September 6, 2022, behind closed doors.²⁶ On December 6, 2022, the EU Council and the European Parliament came to a provisional agreement on the revision of the EU ETS for aviation. While trilogues are not part of any formal legislative procedure in the EU, they have become a standard for adopting legislation.²⁷ After a lengthy legislative process, the ETS Directive relevant to aviation emissions was finally published on 16 May 2023 and entered into force on 5 June 2023.²⁸

According to the final version of the EU aviation ETS Directive, the EU ETS will temporarily cover intra-EEA flights and departing flights to the United Kingdom and Switzerland, while leaving extra-European flights to fall under CORSIA. Combining Article 25 a(3) and Article 25 a(4) of the Directive, flights to or from countries participating in CORSIA (other than EEA countries, Switzerland, and the United Kingdom) will be exempt from the EU ETS until December 31, 2026.²⁹ This means that flights from a third country can be exempted from the EU ETS until 2027 if the third country participates in CORSIA.

However, such an exemption for the third country from the EU ETS may be terminated. By July 1, 2026, the Commission shall report to the European Parliament and the Council on the environmental integrity of CORSIA.³⁰ In the report, the Commission shall review whether the emission reduction ambition of CORSIA is consistent with the climate target of the Paris Agreement.³¹ Moreover, the other important aspects of CORSIA shall also be reviewed, including the extent of offset participation, its enforceability, transparency, the penalties for non-compliance, processes for public input, the quality of offset credits, monitoring, reporting and verification of emissions, registries, and accountability, as well as rules on the use of biofuels.³² The report shall be accompanied by a legislative proposal to review the ETS Directive as appropriate to support the Paris Agreement goals and the Union’s 2030 and 2050 climate targets to protect the environmental integrity and effectiveness of the Union’s climate initiatives.³³ In addition, the EU ETS shall, as appropriate, be extended to cover flights departing from the EEA to airports located outside the EEA if the Commission has one of the following two findings.³⁴ The first is that the ICAO Assembly by 31 December 2025 did not strengthen the CORSIA scheme in line with achieving its long-term aspirational goal of meeting the Paris Agreement objectives.³⁵ The second is that the states participating in CORSIA “represent less than 70 percent of international aviation emissions using the most recent available data.”³⁶ Incoming flights are not subject to the EU ETS. Moreover, any costs incurred under CORSIA shall be deductible to avoid double counting.³⁷

In this article, it is expected that CORSIA will be considered insufficient by the Commission and that extra-EEA flights departing from the EEA will be covered by the EU ETS from 2027 onward. This is because CORSIA is an offset scheme that controls emissions, it shares the drawbacks of these schemes. There is no absolute emission cap, implying that total emissions can increase without a limit provided they are offset.³⁸ Moreover, in this context, it is important to point out that an extension of the ETS to cover extra-EEA flights would not be deferred again.³⁹

Pairs,” ICAO, accessed April 18, 2023, https://www.icao.int/environmental-protection/CORSIA/Documents/CORSIA%20States%20for%20Chapter%203%20State%20Pairs_3Ed_web.pdf.

21. European Commission, “Proposal for a Directive of the European Parliament and of the Council amending Directive 2003/87/EC as regards Aviation’s Contribution to the Union’s Economy-Wide Emission Reduction Target and Appropriately Implementing a Global Market-based Measure,” COM (2021) 552 final, 2021/0207(COD), July 14, 2021, <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52021PC0552>.

22. “ICAO CORSIA States for Chapter 3 State Pairs”.

23. The reasons why China is not in agreement with the CORSIA will be discussed in section 2.2 below.

24. European Commission, “Proposal for a Directive of the European Parliament and of the Council amending Directive 2003/87/EC”.

25. European Parliament, “Amendments adopted by the European Parliament on 8 June 2022 on the proposal for a directive of the European Parliament and of the Council amending Directive 2003/87/EC as regards aviation’s contribution to the Union’s economy-wide emission reduction target and appropriately implementing a global market-based measure (COM(2021)0552 – C9-0319/2021 – 2021/0207(COD)),” P9_TA(2022)0230, June 8, 2022, [https://data.consilium.europa.eu/doc/document/ST-10798-2022-INIT/en/pdf](https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52022AP0230&from=EN; Council of the European Union, “Proposal for a Directive of the European Parliament and of the Council amending Directive 2003/87/EC”– General Approach,” 10798/22, June 30, 2022, <a href=).

26. “Updates on Fit for 55 Package,” European Regions Airline Association, accessed September 30, 2022, <https://www.eraa.org/updates-fit-55-package>.

27. Thomas Laloux, “Agency Slack as Cause of Deviation in Trilogue Negotiations,” *Journal of European Public Policy* 28, no. 1 (2021): 146.

28. “Revision of the EU Emissions Trading System for aviation, as part of the European Green Deal In ‘A European Green Deal,’” European Parliament, accessed August 5, 2023, <https://www.europarl.europa.eu/legislative-train/package-fit-for-55/file-revision-of-the-eu-emission-trading-system-for-aviation>.

29. European Parliament and Council, “Directive (EU) 2023/958 of the European Parliament and of the Council of 10 May 2023 Amending Directive 2003/87/EC as regards Aviation’s Contribution to the Union’s Economy-Wide Emission Reduction

Until the full force of CORSIA unfolds in principle, making all international flights subject to the offset requirement, flights flying between the EEA and states that do not participate in CORSIA, other than flights to Switzerland and the United Kingdom, will also be exempt from the EU ETS before December 31, 2026.⁴⁰ Furthermore, consistent with CORSIA, flights to and from least developed countries (LDCs) and small island developing states (SIDSs) will be permanently exempt from the EU ETS, unless the LDCs and SIDSs participate in CORSIA or their “GDP per capita equals or exceeds the Union average.”⁴¹

The final version of the EU aviation ETS Directive can be regarded as a balance between the EU’s emission reduction ambition and its promise to facilitate the progress of CORSIA. On the one hand, as the European Parliament stated, the environmental effects of CORSIA, which is an offset mechanism to compensate for emissions, are not as adequate as the EU ETS to achieve the temperature target of the Paris Agreement.⁴² Given the EU’s concern regarding the environmental integrity of CORSIA, it is necessary to recover the EU ETS’s coverage on extra-European flights. On the other hand, given the EU’s promise to facilitate the progress of CORSIA, the EU is going to adopt temporary derogations to its ETS again and assess the implementation and application of CORSIA.

In fact, the extension of the EU aviation ETS can be regarded as an example of “normative power Europe”. The term “normative power Europe” means that Europe rules the world by providing normative rules for the world.⁴³ In other words, promoting other states to adopt rules that are consistent with the relevant EU rules is argued as the “‘gold standard’ of European regulatory influence.”⁴⁴ “Normative power Europe” began in the field of human rights and then moved on to other issues.⁴⁵ The extension of the EU aviation ETS can be regarded as a signal that “normative power Europe” has been evolving from spreading human rights standards to the issue of controlling aviation GHGs.

In addition to regarding the EU as a “normative power”, political elites in member states of the EU also pointed out the EU’s “ethical” characteristics, which serve as a “force for good.”⁴⁶ The extension of the EU ETS to cover aviation GHG emissions reflects the “ethical” characteristics. Generally, the EU’s ethical normative power means that the EU has been an “institutional repository of member states’ shared second-order normative concerns,”⁴⁷ which provides concerns about human rights, democracy promotion, environmental protection etc.⁴⁸ The extension of the EU ETS to cover aviation GHG emissions implies a further concern of the EU on climate change.

However, the EU’s role as a kind of “ethical” power is also criticized by scholars. For example, such an “ethical” role of the EU is criticized as “hypocrisy”.⁴⁹ This is because the EU argued that its normative rules are beneficial for the world, while it also pursues its own economic and political interests through these rules. In fact, if a person is not a liberal-idealist who supports cosmopolitan, it is difficult to persuade him/her to accept that there are universal values and interests of all states in the world.⁵⁰ Moreover, the “ethical” role of the EU can cause two problems. First, it could make the EU become a weak and ineffective player that has no capacity to promote the member states to achieve economic and strategic interests.⁵¹ Second, it also has the potential to succumb to the “temptations of moralistic crusades.”⁵² This means that the EU may fall into the temptation to think that the values and interests that are good for itself are also good for the rest of the world, and therefore spread them in a way like the “crusades”. Such “crusades” would cause a “bad” result which is a departure from the original good purpose.⁵³

Target and the Appropriate Implementation of a Global Market-based Measure (Text with EEA relevance),” OJ L 130, May 16, 2023, 128, amended art 25a(3) - amended Art 25a(4), <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32023L0958>.

30. Ibid, Art 28b(2).

31. Ibid.

32. Ibid.

33. Ibid. Art 28b(3).

34. Ibid.

35. Ibid.

36. Ibid.

37. Ibid.

38. Uwe M Erling, “International Aviation Emissions under International Civil Aviation Organization’s Global Market Based Measure: Ready for Offsetting?,” *Air and Space Law* 42, no. 1 (2017): 5.

39. European Parliament, “European Parliament legislative resolution of 18 April 2023 on the proposal for a directive of the European Parliament and of the Council amending Directive 2003/87/EC as regards aviation’s contribution to the Union’s economy-wide emission reduction target and appropriately implementing a global market-based measure (COM(2021)0552 – C9-0319/2021 – 2021/0207(COD)),” A9-0155/2022, 18 April 2023, chapeau para.30, https://www.europarl.europa.eu/doceo/document/TA-9-2023-0102_EN.html.

40. European Parliament and Council, “Directive (EU) 2023/958 of the European Parliament and of the Council of 10 May 2023 Amending Directive 2003/87/EC as regards Aviation’s Contribution to the Union’s Economy-Wide Emission Reduction Target and the Appropriate Implementation of a Global Market-based Measure (Text with EEA relevance),” OJ L 130, May 16, 2023, 128, amended art 25 a(5), <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32023L0958>.

41. Ibid., 129, Art 25 a(6).

42. European Parliament, “Amendments adopted by the European Parliament on 8 June 2022 on the proposal for a directive of the European Parliament and of the Council amending Directive 2003/87/EC as regards aviation’s contribution to the Union’s economy-wide emission reduction target and appropriately implementing a global market-based measure (COM(2021)0552 – C9-0319/2021 – 2021/0207(COD)),” P9_TA(2022)0230, June 8,

Due to the drawbacks and limits of the “ethical” role of the EU, it may be difficult for the EU to diffuse its normative rules to other states in the world. If only the EU adopts virtuous rules, but other states do not, this may distort competition between the EU and other states, particularly those that are the EU’s closest competitors. The distortions of competition will put the EU’s stakeholders, such as businesses, at a competitive disadvantage and cause them to suffer economic losses.

To avoid the issues caused by the “ethical” role of the EU, such as distorting competition, it has been argued that the European normative power should have an enforcement arm to ensure its effectiveness, like the European Commission in competition law.⁵⁴ However, comprehensive EU enforcement is a relatively slow process. At least, regarding the EU aviation ETS, there is no enforcement mechanism to ensure other states to comply with the ETS though the ETS will cover the third-party states’ airlines in the future.

China’s Response to CORSIA

China was an early supporter of CORSIA in 2018, but it temporarily decided not to participate. China did not submit a participation application.⁵⁵ In contrast, China has expressed its opposition to the designs of CORSIA. First, China has expressed its objection to Resolutions A40-18 and A40-19 of the ICAO assembly for several reasons. China disapproves the CORSIA’s carbon-neutral growth target, freezing emissions at 2020 levels.⁵⁶ In addition, China objected to the unified baseline for all ICAO member states, no matter whether the baseline includes 2020 emissions.⁵⁷ Furthermore, China holds the opinion that “ICAO Council has no mandate or competence to oversee the implementation of CORSIA.”⁵⁸ The China Air Transport Association reaffirmed in September 2022 China’s opposition against CORSIA and its goals of carbon-neutral growth from 2020 for international aviation and net-zero carbon emissions by 2050 for international aviation.⁵⁹ Despite China’s opposition, the ICAO Assembly 41st Session presented the 2050 net-zero emissions goal⁶⁰ and changed the CORSIA baseline from 2024 onward to 85 percent of 2019 CO₂ emissions.⁶¹ China again declared its reservations against the 2020 carbon neutrality and 2050 net-zero target as well as against CORSIA.⁶² According to Mai and Yan, concerns about “fairness regarding burden sharing in climate change mitigation”⁶³ are one of the reasons China opposes CORSIA’s design.

However, the non-participation of China in CORSIA should not be taken as an indication that it ignores the importance of reducing aviation emissions. China’s legislative initiatives support the claim that it recognizes the challenge presented by aviation emissions.

In 2020, China presented its national climate target, vowing to have its emissions peak by 2030 and to become carbon neutral by 2060.⁶⁴ Moreover, according to the “14th Five-Year” Civil Aviation Development Plan (2021–2025), China will develop carbon pricing mechanisms in the civil aviation sectors, develop the monitoring, reporting, and verification mechanisms for civil aviation, and strengthen the investment in green programs and technologies for civil aviation.⁶⁵

As early as 2013, the National Development and Reform Commission (NDRC) presented the *China Civil Aviation Enterprise Greenhouse Gas Emissions Accounting Method and Reporting Guidelines (Trial)*, which stipulates the accounting method for carbon emissions under the corporate legal person boundary.⁶⁶ In 2016, the NDRC stated that the proposed Chinese national ETS would cover aviation sectors in the *Notice of the General Office of the National Development and Reform Commission on Effectively Doing a Good Job in Start-*

2022, 169, amendment 17, Proposal for a directive recital 11a (new), <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX-52022AP0230&from=EN>.

43. Ian, Manners, “Normative Power Europe: A Contradiction in Terms?,” *JCMS: Journal of common market studies* 40, no. 2 (2002): 252.

44. Alasdair R. Young, “The European Union as a Global Regulator? Context and Comparison,” in *The European Union as a Global Regulator?*, ed. Alasdair Young (London: Routledge, 2017), 6.

45. Richard, Young, “Normative Dynamics and Strategic Interests in the EU’s External Identity,” *JCMS: journal of common market studies* 42, no. 2 (2004): 415-35.

46. Adrian Hyde-Price, “A ‘tragic Actor’? A Realist Perspective On ‘Ethical Power Europe,’” *International affairs* 84, no.1 (January 2008): 32.

47. Ibid.

48. Ibid.

49. Hyde-Price, A ‘tragic Actor’?: 32-3.

50. Hyde-Price, A ‘tragic Actor’?: 32.

51. Hyde-Price, A ‘tragic Actor’?: 34.

52. Hyde-Price, A ‘tragic Actor’?: 35.

53. Hyde-Price, A ‘tragic Actor’?: 44.

54. Kati Cseres and Annalies Outhuijse, “Parallel Enforcement and Accountability: The Case of EU Competition Law,” in *Law Enforcement by EU Authorities*, ed. Miroslava Scholten and Michiel Luchtman (Cheltenham: Edward Elgar Publishing, 2017), 82-114.

55. “ICAO passed the CORSIA carbon emission unit standard, China is still waiting to see? (国际民航组织通过CORSIA碳排放单位标准, 中国仍在观望?),” Tanjiaoyi, accessed March 18, 2022, <http://www.tanjiaoyi.com/article-26307-5.html>.

56. Representative of the People’s Republic of China on the Council of ICAO, “Statement of the Chinese Delegation on the Consolidated Statement of Continuing ICAO Policies and Practices Related to Environmental Protection–Climate Change and on the Consolidated Statement of Continuing ICAO Policies and Practices Related to Environmental Protection–Carbon Offsetting And Reduction Scheme For International Aviation,” CN(2019)332, October 8, 2019, 2, chapeau, https://www.icao.int/Meetings/a40/Documents/Resolutions/china_EN.pdf.

ing the National Carbon Emissions Trading Market.⁶⁷ Furthermore, the Civil Aviation Administration of China (CAAC) published the *Interim Measures for the Monitoring, Reporting, and Verification of Carbon Dioxide Emissions from Civil Aviation Flight Activities*, which shows the requirements for the monitoring, reporting, and verification of CO₂ emissions from aviation flight activities.⁶⁸ These normative documents for China’s aviation sectors, including international aviation, imply that the country has taken active steps to monitor CO₂ emissions from aviation, which can serve as the basis for its national ETS to include the aviation sector. However, China’s MRV requirements for aviation sectors are not consistent with the MRV requirements of CORSIA, which was written in the *First Edition of Annex 16—Environmental Protection, Volume IV—Carbon Offsetting and Reduction Scheme for International Aviation*. For example, while the CORSIA’s MRV requirements list five “methods for the monitoring of fuel consumption,”⁶⁹ China’s MRV guidelines only recognized three methods.⁷⁰

Challenges for the EU in the International Dimension

Non-Consistency with “Anti-Duplicative Clause”

The “anti-duplicative clause” (or “exclusivity clause”) is stated in ICAO Assembly Resolution A40-19.⁷¹ Paragraph 18 of this Resolution states that “the CORSIA is the only global MBM applying to CO₂ emissions from international aviation to avoid a possible patchwork of duplicative state or regional MBMs, ensuring that international aviation CO₂ emissions are accounted for only once.”⁷²

The anti-duplicative clause contained in this resolution is not legally binding. Even if an ICAO Assembly resolution does not have a legally binding nature⁷³, it can still provide an obligation for ICAO member states since it is a “reckonable force in international relations.”⁷⁴ In particular, ICAO resolutions enjoy relatively powerful persuasion and political leverage compared with other international resolutions.⁷⁵ In addition, Resolution A40-19 of the ICAO Assembly resolution was the result of substantial negotiations, which emphasizes the shared expectation that the resolution will be followed.⁷⁶

Dobson argued that while the EU is not a member of ICAO, ICAO Resolution A40-19 and the “anti-duplicative objective” still have political weight on the EU.⁷⁷ This article agrees with Dobson’s view. First, the EU is not an ICAO member, but the EU’s member states are. Therefore, the relationship between the EU and its member states may enable the political pressure that resulted from the “anti-duplicative clause” to be translated and result in its enforcement. It is insightful to note that in 2019, the European Parliament showed its deep concern that the ICAO Resolution A40-19 includes the “exclusivity clause” of CORSIA, i.e., the “anti-duplicative clause”. The European Parliament urged the EU Member States to “file a formal reservation concerning this part of the resolution to preserve the Union’s legislative autonomy with regard to the measures intended to reduce GHG emissions from the aviation sector.”⁷⁸ Furthermore, on January 1, 2021, the EU Council decided that the EU should participate in the CORSIA.⁷⁹ This demonstrates how CORSIA, including its grounding in Resolution A40-19, influenced the EU to recognize it as a tool for emission reduction. Hence, the participation of the EU in the CORSIA implies that the EU has been influenced by ICAO Resolution A40-19.

To determine how much Paragraph 18 may restrict the EU in its actions, it is important to examine how the “anti-duplicative clause” should be interpreted. According to Marek Jaskowski, it is possible to claim that the “anti-duplicative

57. *Ibid.*, part II para 6.

58. *Ibid.*, part II para 15.

59. “China Aviation Association and its Member Airlines Issued a Statement on Taking Positive Measures in the Field of Air Transport Environmental Protection (中国航协联合会员航企发表关于在航空运输环境保护领域采取积极措施的声明),” CAACNEWS, accessed September 27, 2022, http://www.caacnews.com.cn/1/2/202209/t20220927_1354039.html.

60. International Civil Aviation Organization, “Resolution A41-21: Consolidated Statement of Continuing ICAO Policies and Practices related to Environmental Protection - Climate Change, Adopted by the 41st Session of the ICAO Assembly,” October 7, 2022, chapeau para 16, https://www.icao.int/environmental-protection/Documents/Assembly/Resolution_A41-21_Climate_change.pdf.

61. *Ibid.*, para 11.

62. “Statement by the Delegation of China on the Consolidated Statement of Continuing ICAO Policies and Practices Related to Environmental Protection - Climate Change and the Consolidated Statement of Continuing ICAO Policies and Practices related to Environmental Protection - Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA),” Representative of the People’s Republic of China on the Council of ICAO, accessed December 8, 2022, https://www.icao.int/Meetings/a41/Documents/Resolutions/China_EN.pdf.

63. Duong Thi Thuy Mai and Bo Yan, “Divergences between the European Union and China on Reducing International Aviation Emissions,” *Asia Europe Journal* 21, no. 1 (2023): 15.

64. Central Committee of the Communist Party of China and State Council, “Opinions of the Central Committee of the Communist Party of China and the State Council on Completely, Accurately and Comprehensively Implementing the New Development Concept and Doing a Good Job of Carbon Neutrality (中共中央国务院关于完整准确全面贯彻新发展理念做好碳达峰碳中和工作的意见),” October 24, 2021, https://www.gov.cn/zhengce/2021-10/24/content_5644613.htm.

65. General Administration of Civil Aviation, National Development and Reform Commission, and Ministry of Transport of the People’s Republic of China, “The ‘14th Five-Year’ Civil Aviation Development Plan (‘十四五’民用航空发展规划),” December 24, 2021, chapter 7, <https://www.gov.cn/zhengce/zhengceku/2022-01/07/5667003/files/d12ea75169374a15a742116f7082df85.pdf>.

66. National Development and Reform Commission of Transport of the People’s Republic of China,

clause” was created to prevent international aviation emissions from being accounted for more than once due to the proliferation of MBMs.⁸⁰ Jaskowski argued that the EU ETS would not contradict other MBMs except CORSIA and that international aviation emissions are not counted more than once.⁸¹ In addition, Jaskowski pointed out the risk of exclusion from all MBMs, i.e., that aircraft operators will not be regulated by any MBMs if the aircraft comes from a country not participating in CORSIA and that there are no other MBMs to control its emissions.⁸² Hence, according to Jaskowski’s interpretation, if unilateral measures may prevent the double counting of aviation emissions, they may be recognized by the ICAO.

From a historical perspective, the ICAO Assembly rejects unilateral measures for international aviation. In 2017, the ICAO Assembly “urged contracting states not to implement an ETS on other contracting states’ aircraft operators except based on mutual agreement between those states”⁸³ in Resolution A36-22. While the ICAO Assembly recognized the environmental effectiveness of unilateral measures for international aviation, the ICAO Assembly urged the member states to “engage in constructive bilateral and/or multilateral consultations and negotiations with other States to reach an agreement.”⁸⁴ Bartels thought that the ICAO Assembly has never implicitly endorsed unilateral measures for international aviation.⁸⁵ This is because, in Resolution A37-19, the ICAO Assembly urged “states to respect the guiding principles listed in the Annex, when designing new and implementing existing MBM market-based-measures for international aviation.”⁸⁶ Moreover, in 2013, the ICAO resolution clarified that only MBM measures determined through bilateral and multilateral negotiation can be accepted. Based on Paragraph 16 of Resolution A38-18, MBMs for international aviation should “engage in constructive bilateral and/or multilateral consultations and negotiations.”⁸⁷ Hence, for consistency with historical resolutions, although unilateral measures to control GHG emissions will not result in the double counting of international aviation emissions, the anti-duplicative clause still excludes unilateral measures for GHG emission reduction.

Given the purpose of the “anti-duplicative clause” emphasized by Jaskowski and the ICAO Assembly’s historical statements, the “anti-duplicative clause” can be interpreted as a clause ostracizing any unilateral MBM but recognizing the other bilateral or unilateral MBMs that will not cause the double counting of international aviation emissions.

Based on the interpretation of the “anti-duplicative clause,” the proposed scope of the EU ETS and CORSIA will be tested by the clause. First, the “anti-duplicative clause” will oppose any unilateral measure by the EU aviation ETS proposed to cover extra-European flights starting in 2027. This is because, from 2027 onwards, CORSIA will become a mandatory scheme to cover extra-European flights that have large emissions and fly on international routes. The regulation of the EU ETS on extra-European flights will cause the double counting of international aviation emissions. Second, Jaskowski discovered that the CORSIA scheme defines “international aviation” as an aircraft that departs from an “airdrome of a state or its territories” and lands at an “airdrome of another state or its territories.”⁸⁸ This means that the intra-EEA flights, which fly between two different countries within the EEA, also belong to “international aviation.”⁸⁹ Hence, intra-EEA flights should also be regulated by CORSIA. Given the interpretation of the “anti-duplicative clause”, it depends on whether it will cause double counting of aviation emissions as to whether the proposed coverage of intra-EEA flights by the EU aviation sectors will violate the “anti-duplicative

“Greenhouse Gas Emission Accounting Method and Reporting Guidelines for Chinese Civil Aviation Enterprises (Trial) (中国民用航空企业温室气体排放核算方法与报告指南(试行)),” October 15, 2013, <https://www.ndrc.gov.cn/xxgk/zcfb/tz/201311/W020190905508187976253.pdf>.

67. National Development and Reform Commission of Transport of the People’s Republic of China, “Notice of the General Office of the National Development and Reform Commission on Effectively Doing a Good Job in Starting the National Carbon Emissions Trading Market(国家发展改革委办公厅关于切实做好全国碳排放权交易市场启动重点工作的通知),” January 11, 2016, https://www.gov.cn/xinwen/2016-01/22/content_5035432.htm.

68. General Administration of Civil Aviation of China, “Interim Measures for the Monitoring, Reporting, and Verification of Carbon Dioxide Emissions from Civil Aviation Flight Activities (民用航空飞行活动二氧化碳排放监测、报告和核查管理暂行办法),” November 29, 2018, <http://www.caac.gov.cn/XXGK/XXGK/GFXWJ/202005/P020200509565465444113.pdf>.

69. Natalie L Dobson, “Competing Climate Change Responses: Reflections on Eu Unilateral Regulation of International Transport Emissions in Light of Multilateral Developments,” *Netherlands International Law Review* 67, no. 2 (2020): 191.

70. General Administration of Civil Aviation of China, “Interim Measures for the Monitoring, Reporting, and Verification of Carbon Dioxide Emissions from Civil Aviation Flight Activities (民用航空飞行活动二氧化碳排放监测、报告和核查管理暂行办法),” November 29, 2018, <http://www.caac.gov.cn/XXGK/XXGK/GFXWJ/202005/P020200509565465444113.pdf>.

71. Marek Jaśkowski, “External Aspects of the EU ETS in Aviation in Light of CORSIA,” *International Community Law Review* 23, no. 2-3 (2021): 274.

72. International Civil Aviation Organization, “Resolution A40-19: Consolidated statement of continuing ICAO policies and practices related to environmental protection - Carbon Offsetting and Reduction Scheme for International Aviation (COR-SIA),” October 4, 2019, para 18, https://www.icao.int/environmental-protection/Documents/Assembly/Resolution_A40-19_COR-SIA.pdf.

73. Jaśkowski, “External Aspects of the EU ETS”: 275.

74. Ruwantissa Abeyratne, “ICAO’s Involvement in Outer Space Affairs—a Need for Closer Scrutiny,” *J. Space L.* 30 (2004): 198.

75. *Ibid.*

76. *Ibid.*, 238.

clause”. Since only the MRV requirements of the EU ETS apply to intra-EEA flights, intra-EEA flights will not be double counted. Hence, the scope of the EU ETS, including intra-EEA flights, will not violate the “anti-duplicative clause”.

Risk of Violating the Sovereignty of the Third States

According to the final version of the EU aviation ETS Directive, the EU reserves itself the possibility of covering extra-EEA flights. This implies that the EU has not relinquished the possibility of imposing the EU ETS in extraterritorial contexts should CORSIA not deliver. The expending of the aviation EU ETS to cover extra-EEA flights, which was originally presented in Directive 2008/101/EC, was criticized and resulted in a series of oppositions. For instance, in 2011, China suspended aircraft orders for European Airbus manufacturers to underscore its opposition to the expansion of the aviation EU ETS.⁹⁰ In 2012, the “European Union Emissions Trading Scheme Prohibition Act” was passed in the United States to prevent all US aircraft operators from participating in the aviation EU ETS.⁹¹ Moreover, almost all non-EU states that are participants in ICAO think that the expending of the aviation EU ETS causes extraterritorial jurisdiction, which challenges the sovereignty of these non-EU states.⁹² Furthermore, the Air Transport Association of America and others initiate proceedings against the expanded aviation EU ETS.⁹³ Hence, once the aviation EU ETS recovers the extra-EEA flights in the CORSIA era, the EU may face similar challenges relating to extraterritorial jurisdiction again as it could violate the sovereignty of non-EU states and be strongly opposed again.

“Sovereignty is the idea that there is a final and absolute political authority in the political community.”⁹⁴ Furthermore, through legislative, executive, or judicial means,⁹⁵ a sovereign state enjoys “jurisdiction” to impact persons’ rights.⁹⁶ In particular, “jurisdiction of states” usually means that states’ lawful power to “define and enforce the rights and duties, as well as control the conduct, of natural and juridical persons.”⁹⁷ “Jurisdiction of states” can be named differently based on states’ various actions: states enjoy “legislative jurisdiction or prescriptive competence” when establishing rules; states enjoy “judicial jurisdiction or adjudicative competence” when “establishing procedures for identifying breaches of the rules and the precise consequences thereof”; states enjoy “enforcement jurisdiction or competence” when “forcibly imposing consequences such as loss of liberty or property for breaches or, pending adjudication, alleged breaches of the rules.”⁹⁸ Moreover, the EU, though it is not a “state”, also enjoys legislative power.⁹⁹ The Union can act within the limits of powers transferred to it by the member states.¹⁰⁰

On the one hand, all sovereign jurisdictions must have a legal basis.¹⁰¹ On the other hand, various bases of jurisdiction can make different sovereign authorities all have jurisdiction over one matter.¹⁰² One of the most important issues relating to “jurisdiction” is how to allocate authority.¹⁰³ The “territoriality principle” is the cornerstone of state jurisdiction, which can provide a legal basis for the allocation of state jurisdiction.¹⁰⁴ Within the territory of a state, the jurisdiction of the state is exclusive.¹⁰⁵ This means that, unless the state permits, any other limitation cannot impact the state except the one imposed by itself.¹⁰⁶ If a state exercises its authority “over actors and activities beyond its boundaries,” the state’s action constitutes “extraterritorial jurisdiction.”¹⁰⁷ On the other hand, in general, a sovereign state does not have jurisdiction over the territory of other states.¹⁰⁸ However, each state has a different method for describing the objects included in its territory,¹⁰⁹ which will be discussed later. Furthermore, in addition to the territoriality principle, there are also other principles for allocating jurisdiction that can justify

77. Natalie L Dobson, “Competing Climate Change Responses: Reflections on Eu Unilateral Regulation of International Transport Emissions in Light of Multilateral Developments,” *Netherlands International Law Review* 67, no. 2 (2020): 196.

78. European Parliament, “European Parliament Resolution of 28 November 2019 on the 2019 UN Climate Change Conference in Madrid, Spain (COP 25) (2019/2712(RSP)),” *OJ C* 232, June 16, 2021, 41, para 72, [https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52019IP0079\(01\)](https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52019IP0079(01)).

79. “Aviation Emissions: EU Confirms its Participation in the CORSIA Voluntary Phase from 2021 and Chooses More Ambitious Option to Calculate its Offsetting Requirements,” Council of the European Union, accessed March 8, 2023, <https://www.consilium.europa.eu/en/press/press-releases/2020/06/25/aviation-emissions-eu-confirms-its-participation-in-the-corsia-voluntary-phase-from-2021-and-chooses-more-ambitious-option-to-calculate-its-offsetting-requirements/>.

80. Jaśkowski, “External Aspects of the EU ETS”: 278-279.

81. *Ibid.*

82. *Ibid.*, 278.

83. International Civil Aviation Organization, “Resolution A37-19: Consolidated Statement of Continuing ICAO Policies and Practices related to Environmental Protection – Climate Change,” October 8, 2010, para 6(c), https://www.icao.int/environmental-protection/37thAssembly/A37_Res19_en.pdf.

84. *Ibid.*, para 14.

85. Lorand Bartels, “The WTO Legality of the Application of the Eu’s Emission Trading System to Aviation,” *European Journal of International Law* 23, no. 2 (2012): 434.

86. International Civil Aviation Organization, “Resolution A37-19: Consolidated Statement of Continuing ICAO Policies and Practices related to Environmental Protection – Climate Change,” October 8, 2010, para 14, https://www.icao.int/environmental-protection/37thAssembly/A37_Res19_en.pdf

87. International Civil Aviation Organization, “Resolution A38-18: Consolidated Statement of Continuing ICAO Policies and Practices related to Environmental Protection – Climate Change,” Doc 10022, October 4, 2013, I-70, para 16(a), <https://www.icao.int/meetings/glads-2015/documents/a38-18.pdf>.

88. Jaśkowski, “External Aspects of the EU ETS”: 277.

extraterritorial jurisdictions.¹¹⁰ For instance, based on the “nationality principle”, states can have jurisdiction “premised upon the nationality of the perpetrator”;¹¹¹ based on the “passive personality”, states can have jurisdiction premised upon the “nationality of the victim”¹¹²; based on the “protective principle”, states can have jurisdiction on matters relating to their national securities.¹¹³

Based on the territoriality principle, a state can prohibit other states from regulating their internal activities unless other principles can be applied to support their extraterritorial regulation.¹¹⁴ The context of territorial sovereignty includes sovereignty over one’s airspace.¹¹⁵ Article 1 of the International Civil Aviation Covenant attributes states the “complete and exclusive sovereignty over the air space above its territory.”¹¹⁶ Hence, based on this territoriality principle, an aircraft’s international emissions occurring over third countries should be regulated by the third country, regardless of its departure and destination. However, as mentioned above, the EU does not give up the competence to cover emissions from all international flights departing from the EEA on the flight paths between the third country and the EEA. Therefore, operator emissions across the airspace of third countries may likewise be subject to EU regulation. Based on the territoriality principle, the proposed aviation EU ETS would violate the jurisdiction of third countries over their domestic airspace and, thus, their airspace sovereignty.

How to justify the aviation EU ETS’s extraterritorial jurisdiction has been discussed. First, Hertogen argued that the territoriality principle can be reliable if there is a connection between its territory and regulated activity.¹¹⁷ Advocate General Kokott identified such a connection in the EU aviation case (C-366/10, Air Transport Association of America and Others): one of the airports where the third countries’ flights depart from or arrive is located in the EU/EEA.¹¹⁸ Second, Voigt pointed out that the “effects doctrine” can serve as a basis for the EU ETS’s extraterritorial application in the time of global warming. The “effects doctrine” is a means to justify the extraterritorial assertion of sovereignty, which pays more attention to “the location of the conduct’s effects.”¹¹⁹ It reflects that the starting point of the “effects doctrine” is still the territoriality principle, which can protect the integrity of the regulating state.¹²⁰ The integrity of a state could include being “free from harm to its own territory.”¹²¹ Hence, based on the “effects doctrine”, if the aviation EU ETS has higher environmental effectiveness and the EU can establish “a direct, sufficient link between the polluting activity and the EU territory,” the aviation EU ETS applied to extra-EEA can be justified.¹²² However, the above two ideas on how to justify the aviation EU ETS’s extraterritorial jurisdiction can be criticized by Ian Brownlie’s principles,¹²³ particularly the second principle (non-interference in the territorial jurisdiction of other countries) for justifying extraterritorial jurisdiction.¹²⁴ Therefore, the legitimacy of the aviation EU ETS can still be challenged by the non-EU states, particularly those that do not participate in CORSIA.

Moreover, it should be noted that the development of globalization has impacted the exclusive territoriality of the national state.¹²⁵ There is indeed some evidence that the extraterritoriality of legal norms has been promoted to some extent. For example, the EU has made extensive use of extraterritoriality to successfully enforce its competition or personal data protection standards, human rights conditionality, and other areas of jurisdiction.¹²⁶ The possibility of extending extraterritoriality could prompt state actors to take additional measures to control normative infringements on national sovereignty. Hence, as globalization tends to dilute the territoriality of legal norms, it is possible that non-EU states will take further measures to avoid the potential extension of the EU aviation

89. *Ibid.*, 277-78.

90. “China Halts 10 more Airbus Orders,” REUTERS, accessed December 7, 2022, <https://www.reuters.com/article/uk-china-europe-ets-idUSLNE82F01920120316>.

91. Congress.gov, “S.1956 - 112th Congress (2011-2012): European Union Emissions Trading Scheme Prohibition Act of 2011,” November 27, 2012, <https://www.congress.gov/bills/112th-congress/senate-bill/1956>.

92. Veronica Korber Gonçalves, “Climate Change and International Civil Aviation Negotiations,” *Contexto Internacional* 39 (2017): 448.

93. Air Transport Association of America, American Airlines Inc., Continental Airlines Inc., United Airlines Inc. v Secretary of State for Energy and Climate Change, C-366/10, European Court of Justice, ECR I – 13833 (2011), http://climatecasechart.com/wp-content/uploads/sites/16/non-us-case-documents/2011/20111006_2011-No.-C-36610_judgment.pdf.

94. Francis Harry Hinsley, *Sovereignty* (Cambridge: Cambridge University Press, 1986), 1.

95. “Jurisdiction of States,” Oxford Public International Law, accessed April 13, 2023, <https://opil-ouplaw-com.mu.idm.oclc.org/display/10.1093/law:epil/9780199231690/law-9780199231690-e1436#law-9780199231690-e1436-div1-1>.

96. Joseph H. Beale, “Jurisdiction of a Sovereign State,” *Harv. L. Rev.* 36 (1922): 241.

97. “Jurisdiction of States,” Oxford Public International Law, accessed April 13, 2023, <https://opil-ouplaw-com.mu.idm.oclc.org/display/10.1093/law:epil/9780199231690/law-9780199231690-e1436#law-9780199231690-e1436-div1-1>.

98. *Ibid.*

99. “Areas of EU Action,” European Commission, accessed December 7, 2022, https://commission.europa.eu/about-european-commission/what-european-commission-does/law/areas-eu-action_en.

100. *Ibid.*

101. Joseph H. Beale, “Jurisdiction of a Sovereign State,” *Harv. L. Rev.* 36 (1922): 241.

102. “Jurisdiction of States,” Oxford Public International Law, accessed April 13, 2023, <https://opil-ouplaw-com.mu.idm.oclc.org/display/10.1093/law:epil/9780199231690/law-9780199231690-e1436#law-9780199231690-e1436-div1-1>.

ETS. Meanwhile, it is also a challenge for non-EU states to consider what further measures they can take to counter the extraterritoriality of foreign rules.

Minimum intra-EU Harmonization and Regulatory Differentiations

Another intra-EU challenge—the problem regarding minimum harmonization—should also be noted. One of the characteristics of the Directive 87/2003/EC, which establishes the EU ETS, including the EU aviation ETS, is harmonization.¹²⁷ In the context of the EU ETS, harmonization means that the key design elements of the national ETS of each member state should be consistent with the EU ETS.¹²⁸ However, a concern should arise due to the problem of minimum intra-EU harmonization. The minimum intra-EU harmonization in the context of the EU aviation ETS may impede the EU’s capacity for regulatory influence and the negotiating leeway of the European institutions regarding the EU aviation ETS.

Generally, minimum intra-EU harmonization means that the member states must implement the EU minimum standard while they have the relative freedom to set more stringent national standards to protect certain social or welfare interests.¹²⁹ Minimum intra-EU harmonization reflects that the EU seeks to keep a balance between promoting common rules and allowing its member states to pursue more ambitious national standards.¹³⁰ As Dougan stated: “Minimum harmonization is the legal expression of fundamental tensions in the Community’s wider economic and political evolution.”¹³¹

Moreover, minimum intra-EU harmonization implies that regulatory differentiation tends to increase,¹³² which causes a series of issues. One of the typical issues is that it can distort the equal competition within the EU market. Specifically, the producers and service suppliers from the member states that set more stringent standards could bear more costs than those from the member states that only adopt laxer standards, such as the minimum EU standards.¹³³ Given the risk of competitive disadvantage, member states may be unwilling to adopt measures that go beyond the minimum European requirements. However, not all member states always adopt the minimum European requirements. To protect certain social or welfare interests, such as civil welfare affected by aviation emissions, some EU member states still have the incentive to use more stringent national standards than the EU minimum standards. For example, regarding EU ETS implementation, Verschuuren and Fleurke found that some member states largely rely on the EU ETS verification process, while others publish their national inspection policies.¹³⁴

Regulatory differentiation within the EU could lead to a more complex regulatory model in the EU, with different member states applying different levels of stringency.¹³⁵ In other words, the EU regulatory framework, whether in the EU aviation ETS or elsewhere, may lack coherence and consistency across member states. The lack of coherence and uniformity would impact the effectiveness of the efficient functioning of the entire EU integration project.¹³⁶ This implies that the EU’s capacity for regulatory influence could be weakened.

In addition, the regulatory differentiation may also impede the negotiating leeway of the European institutions. This is because the governments of the member states play an important role in EU decision-making.¹³⁷ Specifically, based on their different positions and interests, governments of the member states advance bargain during the deliberations of the Council of Ministers in the EU legislative process.¹³⁸ Differences in standard preferences, either in the EU aviation ETS or elsewhere, could make the bargaining more time-consuming.

Challenges for China in the International Dimension

In contrast to the EU which will incorporate CORSIA into its EU ETS, China has expressed its opposition to CORSIA. Therefore, China will be unlikely to participate in CORSIA before 2027, when participation will be mandatory. However, China has started to gather data and has taken steps to bring its airline operators under its own carbon pricing scheme. This includes setting up its own MRV system. The diplomatic challenge for China may result from the incompatibility of the national MRV obligations for Chinese airline companies and the international MRV systems once the mandatory CORSIA period commences.

First, this section elaborates on the requirements set by CORSIA to have an appropriate MRV system. The implementation of CORSIA necessarily requires the establishment of an MRV system.¹³⁹ On June 27, 2018, the ICAO Council adopted the CORSIA Standards and Recommended Practices (SARPs) as an annex of the Chicago Convention (hereinafter the “CORSIA SARPs”), which contain the MRV requirements of CORSIA.¹⁴⁰ According to Article 2.1.1 of the CORSIA SARPs, covered aircraft operators are those operating international flights with “a maximum-certificated take-off mass greater than 5700 kg”¹⁴¹ and emitting at least 10,000 tons of CO₂ annually.¹⁴² In addition, the CORSIA SARPs entered into force on January 1, 2019. This means that the covered aircraft operators are required to comply with the MRV requirements of the CORSIA starting January 1, 2019. For example, they need to adopt the monitoring method listed by the CORSIA to monitor and record the fuel used by their international flights,¹⁴³ submit monitoring plans and reports of their verified CO₂ emissions to their countries (ICAO member states),¹⁴⁴ etc. Furthermore, ICAO member states need to report the total CO₂ emissions from their international flights to ICAO.¹⁴⁵

As mentioned in Section 2.2, China has been developing its own MRV rules. These are not consistent with the MRV requirements of CORSIA. Given that China’s aircraft operators only must comply with China’s MRV rules, the CORSIA MRV requirements are not implemented by China’s aircraft operators that operate international flights. However, China is a member state of the ICAO, which implies that it is obliged to comply with the Chicago Convention. China’s disregard for the CORSIA MRV requirements can be challenged as being inconsistent with Annex 16 of the Chicago Convention, i.e., the “CORSIA SARPs”.

Annexes of the Chicago Convention enjoy the same legal nature as the Chicago Convention itself, but this is subject to debate. According to Martinez Romera, the original draft of the Chicago Convention did not contain an annex; therefore, the annex is not an “integral part of the Convention.”¹⁴⁶ Following this line of argumentation, annexes do not enjoy the same legally binding force as the Convention itself.¹⁴⁷ Moreover, Romera pointed out that it is the “non-binding/ non-compulsory character” of the annex that helps the ICAO legislative process avoid legal complications and develop ICAO regulations “without much opposition from member states.”¹⁴⁸ In contrast, Jaskowski argued that Article 90 of the Chicago Convention supports the legal nature of annexes.¹⁴⁹ According to Article 90, any annex that contains international SARPs and has been voted by two-thirds of the ICAO Council shall “become effective within three months after its submission to the contracting states or at the end of such a long period as the Council may prescribe unless in the meantime a majority of the contracting states register their disapproval with the Council.”¹⁵⁰ Jaskowski further argued that Article 38 of the Chicago Convention indirectly reflects the legally binding

103. Patrick Capps, Malcolm Evans, and Stratos V Konstadinidis, “Introduction,” in *Asserting Jurisdiction: International and European Legal Perspective*, ed. Patrick Capps, Malcolm Evans, and Stratos V Konstadinidis (Oxford: Hart publishing, 2003), xix.

104. Cedric Ryngaert, *Jurisdiction in International Law* (Oxford: Oxford University Press, 2008), 42.

105. Joseph H. Beale, “Jurisdiction of a Sovereign State,” *Harv. L. Rev.* 36 (1922): 245.

106. *Ibid.*, 245.

107. Christina Voigt, “Up in the Air: Aviation, the Eu Emissions Trading Scheme and the Question of Jurisdiction,” *Cambridge yearbook of European legal studies* 14 (2012): 496.

108. Beale, “Jurisdiction of a Sovereign State,” 245.

109. Ellen S. Podgor, “Extraterritorial Criminal Jurisdiction: Replacing ‘Objective Territoriality’ with ‘Defensive Territoriality,’” *Studies in Law, Politics and Society* 28 (2003): 122.

110. Christina Voigt, “Up in the Air: Aviation, the Eu Emissions Trading Scheme and the Question of Jurisdiction,” *Cambridge yearbook of European legal studies* 14 (2012): 497.

111. Geoffrey R. Watson, “Offenders Abroad: The Case for Nationality-Based Criminal Jurisdiction,” *Yale J. Int’l L.* 17 (1992): 43.

112. *Ibid.*, 1.

113. Kenneth S. Gallant, *International Criminal Jurisdiction: Whose Law Must We Obey?* (Oxford: Oxford University Press, 2022), 601.

114. An Hertogen, “Sovereignty as Decisional Independence over Domestic Affairs: The Dispute over Aviation in the EU Emissions Trading System,” *Transnational Environmental Law* 1, no. 2 (2012): 293.

115. “Jurisdiction of States,” Oxford Public International Law, accessed April 13, 2023, <https://opil-oupplaw-com.mu.idm.oclc.org/display/10.1093/law:epil/9780199231690/law-9780199231690-e1436#law-9780199231690-e1436-div1-1>.

116. “Convention on International Civil Aviation,” Conclusion date: December 7, 1944, United Nations Treaty Series Online, registration no. II-102, art 1, <https://treaties.un.org/doc/Publication/UNTS/Volume%2015/volume-15-II-102-English.pdf>.

117. An Hertogen, “Sovereignty as Decisional

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118. Air Transport Association of America, American Airlines Inc., Continental Airlines Inc., United Airlines Inc. v Secretary of State for Energy and Climate Change, C-366/10, European Court of Justice, ECR I – 13833 (2011), para 124, http://climatecasechart.com/wp-content/uploads/sites/16/non-us-case-documents/2011/20111006_2011-No.-C-36610_judgment.pdf.

119. Christina Voigt, “Up in the Air: Aviation, the Eu Emissions Trading Scheme and the Question of Jurisdiction,” *Cambridge yearbook of European legal studies* 14 (2012): 497.

120. *Ibid.*, 506.

121. *Ibid.*

122. *Ibid.*

123. First, a substantive and genuine connection between the subject matter and the source of jurisdiction must be established; second, the principle of non-interference in the territorial jurisdiction of other countries is strictly adhered to; third, the principles of coordination, reciprocity, and proportionality are observed. See Ian Brownlie, *Principles of Public International Law* (Oxford: Oxford University Press, 2008), 309-12.

124. See Ian Brownlie, *Principles of Public International Law* (Oxford: Oxford University Press, 2008), 309-12.

125. *Ibid.*, 372-93.

126. For example, Mistale Taylor, “The EU’s Human Rights Obligations in Relation to Its Data Protection Laws with Extraterritorial Effect,” *International Data Privacy Law* 5, no. 4 (2015): 246-56.

127. Pablo del Río González, “Harmonization Versus Decentralization in the EU ETS: An Economic Analysis,” *Climate Policy* 6, no. 4 (2006): 457.

128. *Ibid.*, 458.

129. Lorenzo Squintani, *Beyond Minimum Harmonisation: Gold-Plating and Green-Plating of European Environmental Law* (Cambridge: Cambridge University Press, 2019), 7.

130. Michael Dougan, “Minimum Harmonization and the Internal Market,” *Common Market Law Review* 37, no. 4 (2000): 863.

131. *Ibid.*, 856.

force of annexes.¹⁵¹ According to Article 38 of the Chicago Convention, if member states would like to deviate their domestic standards or procedures from international standards or procedures, they are obligated to immediately notify the deviation of the ICAO.¹⁵² In other words, Article 38 implies that member states should comply with international standards in principle unless they present a notification of deviation. According to Abeyratne, it would even be arguable that, except in situations where member states have claimed their withdrawal from an international standard or procedure, all standards contained in the ICAO are legally binding for all member states.¹⁵³ The above discussion shows that different arguments can be presented regarding the question of whether an annex to the Chicago Convention should be interpreted as possessing the same legal force as the Convention itself. Until this question is formally decided, uncertainty will remain.

Independent of the legal position of annexes, the deviation from the MRV requirements of CORSIA could pose diplomatic challenges for China. Deviations to the CORSIA SARPs, including the MRV rules, are “politically tenuous”, which can cause “the perception that it is acceptable for ICAO member states to depart at their discretion from ICAO agreements.”¹⁵⁴ Hence, China may be facing difficult diplomatic positions in the near future if they do not embrace CORSIA in due course before 2027 when it becomes mandatory. In particular, it will be challenging for Chinese airline operators to maintain a double MRV standard that may be required to continue operating international flights to CORSIA member states. Therefore, China may face substantial pressure to align its domestic MRV rules with those of CORSIA.

Conclusions

Given that CORSIA will be mandatory by 2027, most states, except those with low aviation activity, LDCs, SIDSs, or “landlocked developing” states, have to comply with CORSIA. Before 2027, states with different responses to CORSIA will face different diplomatic challenges relating to international aviation emissions. This article examined the different diplomatic challenges of the EU and China based on their different responses to CORSIA.

This article described the different responses of the EU and China to CORSIA during its voluntary period.

On the one hand, the EU actively participates in CORSIA by modifying the EU ETS. In general, the EU supports CORSIA but reserves for itself the right to apply the EU ETS to intra-EEA flights while applying CORSIA to extra-European flights before 2027. However, if CORSIA does not have adequate environmental effectiveness to control aviation emissions, the EU ETS has indicated that it is prepared to employ the EU ETS again for extra-European flights.

The extension of the EU aviation ETS can be regarded as an example of “normative power Europe”, i.e., the European norms diffusion. In other words, the extension of the EU aviation ETS reflects the sign that “normative power Europe” is developing from diffusing human rights standards to other issues, such as controlling aviation GHG emissions. It should be noted that the EU has drawbacks and limits while it has sustainability concerns when positioning itself as an international normative power with “ethical” character. For instance, playing the role of a ‘ethical’ power can be seen as ‘hypocrisy’. Meanwhile, the EU would also face the two risks caused by the “ethical” power. The first one is that “ethical” power may make the EU become weak and ineffective in promoting

132. *Ibid.*, 885.

133. *Ibid.*, 865.

134. Jonathan Verschuuren and FM Fleurke, *Report on the Legal Implementation of the EU ETS at Member State Level: Deliverable D2. 4 ENTRACTE—Economic Instruments to Achieve Climate Targets in Europe (Eu/Fp7)* (Tilburg: TSC, 2014), 83.

135. Michael Dougan, “Minimum Harmonization and the Internal Market,” *Common Market Law Review* 37, no. 4 (2000): 885.

136. See Jo Shaw, “The Treaty of Amsterdam: Challenges of Flexibility and Legitimacy,” *European Law Journal* 4, no. 1 (1998): 63; Neil Walker, “Sovereignty and Differentiated Integration in the European Union,” *Eur. LJ* 4 (1998): 355.

137. Gerald Schneider, Daniel Finke, and Konstantin Baltz, “With a Little Help from the State: Interest Intermediation in the Domestic Pre-Negotiations of EU Legislation,” *Journal of European Public Policy* 14, no. 3 (2007): 445.

138. *Ibid.*

139. International Civil Aviation Organization, “Resolution A39-3: Consolidated Statement of Continuing ICAO Policies and Practices related to Environmental Protection – Global Market-based Measure (MBM) Scheme,” October 7, 2016, para 20, https://www.icao.int/environmental-protection/documents/resolution_a39_3.pdf.

140. International Civil Aviation Organization, *Annex 16 to the Convention on International Civil Aviation Environmental Protection, Volume IV, Carbon Offsetting and Reduction Scheme for International Aviation mechanism (CORSIA)* (Montreal: International Civil Aviation Organization, 2018), <https://elibrary.icao.int/reader/229739/&returnUrl%3DaHR0cHM-6Ly9lbGlicmFyeS5pY2FvLmludC9ob211L3By-b2R1Y3QtZGV0YWlscy8yMjk3Mzk/X2dsPTEqMW13eXNseCpfZ2EgT1RBd01EZ-3dOaK0xTGpFMk9URXhOekF4T-kRRLipfZ2FOTkyTjNZRExCUSpNVFk1TVR-Jd05qRTVOUzR5TGpBdU1UWTVNVVl3TmP-FNU5TNHdMakF1TUEuLg%3D%3D?product-Type=ebook>.

141. *Ibid.*, II-2-1, para. 2.1.1.

142. *Ibid.*, II-2-1, para. 2.2.1.1.

143. *Ibid.*

144. *Ibid.*, II-2-3, para. 2.2.2.1. and II-2-5, para.2.3.1.1.

the member states to protect their political and economic interests. The second one is that the EU may also fall into the “temptations of moralistic crusades”. Given the limits of the EU to play a role of international normative power, it is possible that only the EU adopt virtuous rules, such as the EU aviation ETS rules. In other words, if the EU imposes virtuous rules on itself and on its businesses and citizens without being followed by its closest competitors, distortions of competition will be caused. Such distortions of competition will make the stakeholders of the EU, such as its businesses, at a competitive disadvantage and bear detriments.

Furthermore, from a broader perspective, the specific measures in the climate transition of the EU may conflict with the EU’s strategic positioning, such as “normative power Europe”. For example, the EU is making some compromises in the control of aviation GHG emissions as it seeks to expand its EU aviation ETS. The conflict may lead to a setback in geopolitics and power politics that the EU may not have recognized. Ignoring the conflict could force the EU to move further away from the liberal and internationalist project it embraced in the last decades of the 20th century.

On the other hand, China has not participated in CORSIA and has shown reservations about the ICAO’s resolution relating to CORSIA. The unified climate target, baseline, and mechanism of CORSIA are opposed by China. China’s opposition to CORSIA may be the source of future diplomatic conflicts beyond 2027. It might put China’s airline industry in a difficult position if Chinese national MRV rules are not brought into accordance with CORSIA.

In addition, the article discovered that the EU and China have different categories of diplomatic challenges. The main challenge for the EU arises if the EU does extend its ETS to cover extra-EEA flights from 2027 to countries that are either refusing to employ CORSIA or to CORSIA countries in case it is deemed to be insufficient to help attain the Paris Agreement’s objectives. First, such action would contradict the anti-duplicative clause contained in Resolution A40-19. Second, the application of the proposed aviation EU ETS to extra-EEA flights is also reminiscent of the approach taken by the EU under Directive 2008/101/EC, which was opposed by many states. However, resistance might be somewhat lower this time because the majority of countries would already be using CORSIA as the baseline and only a limited amount of additional payments would be required under the EU ETS.

Moreover, the potential extension of the EU ETS to extra-EEA flights constitutes an extraterritorial application of EU rules to other jurisdictions, which can be perceived as violating a third state’s sovereignty. However, it should be noted that, as the globalization accentuates, the territoriality of legal norms has been diluted. In other words, there is a risk that the extraterritoriality of legal norms has been somewhat encouraged. For example, by extensively using extraterritoriality, the EU has successfully enforced its competition or personal data protection standards, human rights conditionality, and other areas of jurisdiction. On the one hand, the risk of an extension of extraterritoriality may be the trigger for further measures by state actors to curb normative encroachments on national sovereignty. The states’ possible further measures to curb normative encroachments on national sovereignty will impose additional barriers to the potential extension of the EU aviation ETS. Meanwhile, it will also be a challenge for state actors to decide what further measures they can take to face the potential extraterritoriality of the EU aviation ETS.

In addition, there is a problem of minimum intra-EU harmonization in the EU. The minimum intra-EU harmonization may lead the member states of the EU

145. *Ibid.*, II-2-5, para.2.3.2.1.

146. Beatriz Martinez Romera, *Regime Interaction and Climate Change: The Case of International Aviation and Maritime Transport* (London: Routledge Taylor & Francis Group, 2017), 86.

147. *Ibid.*, 86-7.

148. *Ibid.*, 87.

149. Marek Jaśkowski, "External Aspects of the EU ETS in Aviation in Light of CORSIA," *International Community Law Review* 23, no. 2-3 (2021): 276.

150. "Convention on International Civil Aviation," Conclusion date: December 7, 1944, United Nations Treaty Series Online, registration no. II-102, art 90, <https://treaties.un.org/doc/Publication/UNTS/Volume%2015/volume-15-II-102-English.pdf>.

151. Jaśkowski, "External Aspects of the EU ETS": 276.

152. "Convention on International Civil Aviation," Conclusion date: December 7, 1944, United Nations Treaty Series Online, registration no. II-102, art 38, <https://treaties.un.org/doc/Publication/UNTS/Volume%2015/volume-15-II-102-English.pdf>.

153. Ruwantissa Abeyratne, *Rulemaking in Air Transport A Deconstructive Analysis* (Berlin: Springer-Verlag, 2016), 102–105.

154. Natalie L. Dobson, "Competing Climate Change Responses: Reflections on Eu Unilateral Regulation of International Transport Emissions in Light of Multilateral Developments," *Netherlands International Law Review* 67, no. 2 (2020): 198.

to be reluctant to adopt measures that surpass the minimum European requirements to sustain their competitive advantages in the intra-EU market. However, some EU countries have an incentive to apply stricter national rules than the EU minimum to protect certain social or welfare interests. This means that there may be regulatory differentiations within the EU, either in the regulation of aviation emissions or in other regulatory areas. Such regulatory differentiations may impede the EU's capacity for regulatory influence and the negotiating leeway of the European institutions regarding the EU aviation ETS.

With regard to CORSIA, the major diplomatic challenge for China is its deviation from the MRV requirements of CORSIA. It has worked hard to establish a national MRV system in place to enable it to introduce its own ETS, which will be expanded to include aviation as well. If this system is indeed set up, it must be compatible with CORSIA by 2027. Moreover, Chinese aviation operators must fully comply with CORSIA's MRV system in addition to the domestic Chinese one. The adequate transition periods could be significantly relevant.

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