Sustainable governance of aviation: changing tailwinds: from shareholding to stakeholders?

Buissing, T.N.

Part C – Pursuing Sustainability Objectives

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EU Air Transport and the EU's Environmental Agenda Struggle

A Leap of Faith or Can a CBAM Level the Playing Field?

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Abstract

Air transport, like any sector, must become more sustainable to combat climate change and protect the environment. The EU's Green Deal sets out an ambitious environmental agenda to reach a climate-neutral continent by 2050. The "Fit for 55" legislative package provides sectoral measures, including air transport, to reduce emissions by 55% in 2030. When the additional costs required to comply with these environmental measures lead to competitive distortion, airlines and airports established in the EU and bound by the EU's environmental policy are poised to be negatively affected. More importantly, ticket price increases may lead to "carbon leakage" practices, where the reduction in emissions in one country leads to a rise in another. To mitigate these effects, the Carbon Border Adjustment Mechanism (CBAM) is presented as a possible solution. Applying an economic measure designed for the trade in goods, such as CBAM, to trade in air services is, however, not as simple as it may seem, and its application beyond EU borders is politically sensitive and questionable legally. While the design of a CBAM for aviation is currently on the drawing table, this article maps the different interests at stake and considers the measure in the context of different legal regimes.

Keywords: Sustainability, Environment, EU Green Deal, Fit for 55, Competition, Carbon leakage, Carbon taxation, Carbon Border Adjustment Mechanism (CBAM).

1. INTRODUCTION

Sustainability. It is the keyword at most aviation-related conferences, debates, and in airlines' media campaigns. Like any sector, air transport must reduce its environmental footprint to meet climate targets and avoid further climate change. There is a large consensus, especially in Europe and the United States and across the industry, including airports, airlines, manufacturers, the supply chain, air traffic management, and innovators, that a sustainable future is the only way forward. But how to get there? Aviation is under heavy scrutiny to get a greener footprint – or flyprint. Even though the contribution of air transport to the total level of CO2 emissions is limited, the percentage is expected to grow in the following decades.[1] With the technological advancement and know-how required for the large-scale use of alternate fuels and the electrification of aircraft even further down the line, the industry is under increasing pressure to reduce emissions in the shorter term. The pressure is part of a more significant trend of changing passenger expectations, litigation by environmental action groups and more political interference.[2] Governments, who traditionally have close links with aviation industry actors, increasingly exercise direct control through national laws or policy measures and indirectly influence the management and governance of, for instance, airports and airlines to meet their own climate ambitions.[3]

With its Green Deal of December 2019,[4] the EU Commission has set out one of the most ambitious environmental agendas to reach a climate-neutral continent by 2050.[5] On 14 July 2021, the EU Commission presented the '"Fit for 55" (FF55) legislative package' addressing, among others, sectoral measures for air transport. The EU aviation industry is on board with its own "Destination 2050" Sustainability

1. Before COVID-19, ICAO forecasted in *Environmental Trends in Aviation to 2050*, that emissions in 2050 could increase by a factor ranging from approximately 2 to 4 times the 2015 levels.
2. See, the Urgenda case in the Netherlands, Judgment of 20 Dec. 2019, ECLI:NL:HR:2019:2007 and a similar case before the Bundesverfassungsgericht, Order of the First Senate of 24 March 2021, BvR 2656/18, confirming the State's obligation to reduce greenhouse gasses emissions, the judgement of 26 May 2021, ordering Royal Dutch Shell to reduce its emissions, ECLI:NL:RBDHA:2021:5339 and a (failed) attempt to have more strict environmental conditions attached to the State aid granted to KLM during COVID, see judgement of 9 December 2020, ECLI:NL:RBDHA:2020:12440.
3. I.e., the ban on domestic flights coming into effect in France in April 2022, the announcement of the Dutch government on 24 June 2022 to reduce the number of flights at Schiphol Airport, or Israel's announcement to ban four-engine aircraft amid environmental concerns.
4. EU Communication, The European Green Deal, COM(2019) 640 final.
5. See, for instance, EU Regulation 2021/1119 *establishing the framework for achieving climate neutrality*, Brussels, 12-05-2021, EU Communication, *Pathway to a Healthy Planet for All - EU Action Plan*: *Towards Zero Pollution for Air, Water and Soil*, COM(2021) 400 final, and EU Commission proposal COM(2020) 563 final.

Roadmap,[6] published in February of the same year. Nevertheless, aviation stakeholders warn that the combination of FF55 measures will increase the risk of "carbon leakage", and that compliance leads to increased costs and, *de facto,* competitive distortion between EU and non-EU airlines.[7] And there lies the crux. Climate change is a worldwide issue, whereas air transport is a global business governed by a special international regime. Pollution does not stop at the border, and environmental measures come at a cost. To mitigate the negative side-effects of the FF55 measures for its own industry in conjunction with the cross-border nature of air transport, the EU Commission investigates whether a Carbon Border Adjustment Mechanism (CBAM) can be applied to the operation of international air services.

A CBAM for aviation has not yet been drawn up, but how the mechanism will be designed, and the measures qualified, can have considerable implications- and repercussions. Applying a CBAM to international air services is not just an economic or financial measure but is also politically and legally sensitive when considering international relations. This article analyses the significant interests at stake and, through studying the FF55 measures and CBAM, brings together areas of international air law, EU law, environmental law, and trade law.The CBAM mechanism, which will be analysed in more detail in section 3 of this article, is a tool derived from the trade in goods. It envisages preventing manufacturers of goods from moving their production outside the EU or benefitting from lower environmental standards elsewhere before importing the goods into the EU.[8] However, airports cannot relocate, nor can EU airlines move their 'Principal Place of Business' outside the EU.[9] Both are "homebound" by the State in which they are established;[10] as a corollary, they must abide by the EU's environmental standards, fuelling the debate who is influencing airlines behaviour and ultimately steering the airline's business decisions in this particular environment field. At the same time, these environmental standards cannot be enforced in the same manner vis-à-vis third States, including their airlines and airports.

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6. Destination 2050 - A Route To Net Zero European Aviation, SEO & NLR (February 2021), www.destination2050.eu (last visited: 29 August 2022).
7. See, https://a4e.eu/publications/the-european-green-deal-and-the-fit-for-55-package/ (last visited: 29 August 2022).
8. That is, CBAM as applied to trade in goods.
9. One of the requirements to be considered an EU airline ex Art. 4(a) of Regulation 1008/2008.
10. The establishment of airlines in a State concerns, amongst other things, licensing, nationality requirements and designation. The link between the State and airlines will be scrutinized in another article as part of the series for the PhD study: *"Who 'governs' the airline?"* (Working title).

On the international level, progress on environmental standards for aviation is slow. Eyes are on the International Civil Aviation Organization (ICAO), which will have its 41st triannual General Assembly starting in September 2022 to establish a long-term global aspirational goal (LTAG) for reducing CO2 emissions.[11] Albeit a changing momentum, will this be enough to reach consensus amongst its 193 Member States? With that in mind, are the EU environmental measures a necessary leap of faith into the unknown? And is a CBAM-like mechanism an appropriate 'fix' to level the playing field for carriers with their principal place of business in the EU that have no choice but to bear the costs of these environmental measures? Or is it yet another ambiguous paperwork tool with little gain?

This paper will not be able to answer all these questions, but it will set out, in section 2, the EU's environmental policy agenda for aviation and the applicable FF55 measures, their scope and their effect when applied in practice. Section 3 will identify the feasibility and implications of applying a CBAM to aviation from a legal and air policy perspective. The last section will examine the external dimension of the EU's environmental policies for air transport with special reference to international aviation law. This last part will draw from lessons learnt from the past and the current forces in play on the international level.

2. THE EU'S ENVIRONMENTAL POLICY LANDSCAPE FOR AVIATION

To comprehend the full breadth of the issues at stake, this section takes a step back to take stock of the environmental measures applicable to air transport and provide the backdrop against which these measures must be portrayed.

To meet the commitments made under the Paris Agreement (2015)[12] and limit the global temperature increase to 1.5 degrees, the European Green Deal of December 2019 sets out the EU Commission's strategy to achieve its vision for a climate-neutral Europe by 2050.[13] The objective of climate neutrality became binding with the adoption of the EU Climate Law of June 2021.[14] Specific plans for transport

11. See, *Report on the feasibility of a long-term aspirational goal (LTAG) for international civil aviation CO2 emission reductions*, ICAO Committee on Aviation Environmental Protection of March 2022.
12. Paris Agreement, COP21, Paris Climate Change Conference - November 2015.
13. EU Communication, *A Clean Planet for all - A European strategic long-term vision for a prosperous, modern, competitive and climate neutral economy*, COM(2018) 773 final.
14. Art 1, EU Regulation 2021/1119, *establishing the framework for achieving climate neutrality and amending EU Regulations 401/2009 and 2018/1999* ('European Climate Law'), 12-05-2021.

have been drawn up in the 'Sustainable and Smart Mobility Strategy'[15] and the 'Fit for 55' legislative package.[16] The FF55 legislative measures for air transport aim to reduce the consumption of conventional kerosine in aviation through taxation and capping and offsetting emissions while increasing that of sustainable alternative fuels, which use would be exempted from these economic measures. The industry for hydrogen fuel for aircraft and aircraft powered by hydrogen is not expected to mature soon and is, therefore, left out of the scope of this article.[17]

2.1 Competition and Indirect Effects at the International Level

Before addressing the FF55 measures applicable to aviation and their contribution to the 'level playing field' and carbon leakage, it is necessary to understand the correlation between cost increases and competition and how that can lead to carbon leakage. Introducing the FF55 measures will increase costs and thus lead to higher ticket prices. [18] This is particularly problematic for network carriers and those servicing third countries who, unlike airlines only active within the EU's internal air transport market, are in competition with non-EU carriers on these routes. Non-EU network carriers offering the same routes are often less affected by the cost increase due to FF55 measures, especially in long-haul (transfer) markets via non-EU hubs. Due to the uncertainty about price developments for traditional jet fuel and sustainable alternatives, it is challenging to predict ticket prices. A study suggests an average cost increase to non-EU destinations, for instance, Frankfurt-Tokyo, due to the FF55 measures of 50 euros by 2030 and 105 euros by 2035.[19] This cost increase will place EU airlines and airports at a competitive disadvantage compared to non-EU airlines and hubs servicing the same markets. The below paragraph illustrates the ticket price increase per hub on the route Hamburg-Bangkok. The cost increase of flights via non-EU hubs such as Moscow (SVO), Istanbul (IST) or Doha (DXB) is less than via EU airports.

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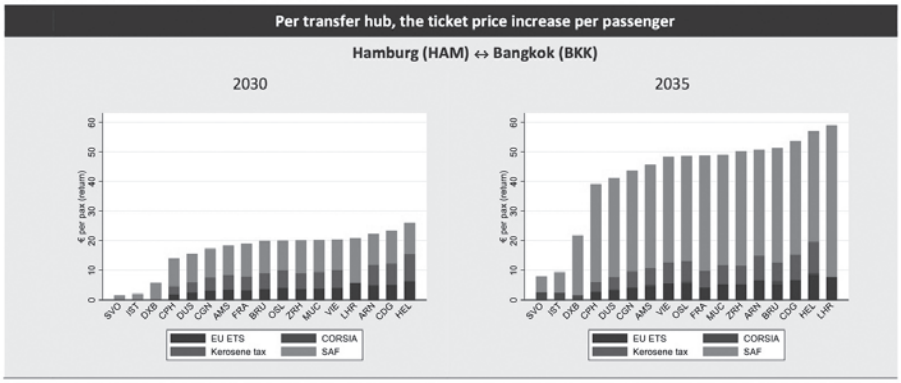
15. EU Communication, *Sustainable and Smart Mobility Strategy – putting European transport on track for the future*, COM(2020) 789 final, 09-12-2020.
16. EU Communication, *'Fit for 55': delivering the EU's 2030 Climate Target on the way to climate neutrality*, COM(2021) 550 final, 14-07-2021.
17. See EU Study *Hydrogen-powered aviation*, McKinsey & Company (May 2020), i.e., page 39; "by 2035 or 2040, there would likely be enough hydrogen supply infrastructure in place for LH2 [hydrogen] aviation to take off", and *Destination 2050*, SEO & NLR (February 2021) at page 97.
18. See, *Aviation fit for 55. Ticket prices, demand and carbon leakage,* SEO & NLR (2022). *Effects of the Fit for 55 Package on the Dutch aviation sector,* CE Delft (2022), and section 3.5 of the study conducted by Schwingeler Consultancy, *Evaluation of the impact of Europe's initiative 'Fit for 55' on air traffic* (2021), confirming that "airlines operating hubs in the EU, 83% of the cost increase of 171.05€ is resulting from the SAF blending mandate, followed by 9% ETS and 8% energy taxation."
19. See, *Aviation fit for 55. Ticket prices, demand and carbon leakage,* SEO & NLR (2022).

Figure 4.3 Ticket prices increases for the Hamburg – Bangkok route



Source: SEO & NLR (2022)

As a result, because of the higher costs, passengers and traffic flows may move or be rerouted through points outside the EU, which will also affect the competitive position of EU airports. In. addition, this may lead to the "carbon leakage"-issue. In the context of the production of goods, carbon leakage occurs when businesses move their production to other countries with less stringent climate policies, or import goods from such countries, thereby evading additional climate costs and increasing, or at least not reducing, the total emissions, i.e. the reduction in emissions in one country leads to an increase in another.[20] In aviation, this phenomenon can occur when passengers fly with non-EU airlines or travel via non-EU hubs to avoid higher ticket costs. These flight patterns likely cause more emissions than the EU alternative.

2.2 The 'Fit for 55'-Measures Affecting Aviation

On 14 July 2021, the EU Commission presented a set of policy measures designed to reduce Green House Gas emissions (GHG) by 55% in 2030 compared to their 1990 levels. The package, also known as the '"Fit for 55" (FF55) legislative package', referring to the -55% reduction target, addresses, among others, sectoral legislation in the field of transport. For aviation, the most relevant new proposals, and the review of the existing acquis in the area of climate, energy, and transport policy, which will be analysed below, include:

- An introduction of the 'ReFuelEU Aviation' initiative aimed at boosting the use of Sustainable Aviation Fuels (SAFs) in the air transport sector;
- A revision/recast of the Energy Taxation Directive (ETD), in which context the taxation of international flights will be discussed.

20. See, for instance, the study *Assessment of carbon leakage protentional for European Aviation*, Transport & Environment (January 2022).

– An adaptation of the EU Emissions Trading System (ETS), with particular reference to changing the special treatment of the aviation sector and its relation to the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) of ICAO.
– The Carbon Border Adjustment Mechanism (CBAM) will be discussed in section 3.

2.2.1 The ReFUel EU Aviation Initiative

On 14 July 2021, as part of the FF55 Package, the EU Commission presented a "Proposal for a review of the Renewable Energy Directive (RED)"[21] to increase the binding share of renewable energy sources of the final energy consumption by 2030. The RED sets principles and the sustainability criteria for, among others, different types of alternative fuels. The production of raw materials for biofuels should, for instance, be genuinely sustainable and not be at the detriment of land used for food and feed purposes or lead to deforestation.[22] The RED sets the overarching framework and targets for using renewable energy, including in the transport sector. It is accompanied by a proposal for a Regulation on "Deployment of Alternative Fuels Infrastructure" (AFIR),[23] for road vehicles, vessels, and stationary aircraft. For air transport, this means the electricity supply "through a standardised fixed or mobile interface to aircraft when stationed at the gate or at an airport outfield position."[24]

The aviation-specific measures are laid down in the "Proposal for a Regulation on ensuring a level playing field for sustainable air transport"[25], also known as the RefuelEU Aviation Initiative, henceforth referred to as the 'proposed regulation for sustainable air transport'. This proposed Regulation presents a blending obligation for fuel suppliers to provide a minimum share of Sustainable Aviation Fuels at EU airports. [26] The use of SAF is pivotal for reaching climate targets, but in 2021 accounted for less than 1% of fuel consumption because of the high costs compared to conventional kerosene.[27] The existing regulatory framework is insufficient to facilitate

21. Proposal for a Directive amending Directive (EU) 2018/2001, EU Regulation 2018/1999 and EU Directive 98/70/EC as regards the promotion of energy from renewable sources, and repealing EU Council Directive 2015/652, COM(2021) 557 final 2021/0218 (COD).
22. Ibid, recital 31.
23. Proposal for a Regulation on the deployment of alternative fuels infrastructure, and repealing Directive 2014/94/EU, COM(2021) 559 final 2021/0223 (COD).
24. Ibid, Article 2(19).
25. Proposal for a Regulation on ensuring a level playing field for sustainable air transport, COM(2021) 561. 2021/0205(COD).
26. Sustainable Aviation Fuels refers to (advanced) biofuels, produced from biological resources such as plants or animal materials, synthetic fuels, or e-kerosine, from non-biological sources, and recycled that can be blended (drop-in) with conventional kerosene.
27. See, EUROCONTROL Data Snapshot #11 on regulation and focused logistics unlocking the availability SAF, 8 June 2021, available at https://www.eurocontrol.int/publication/eurocontrol-data-snapshot-11-saf-airports (last visited at 29 August 2022).

the tremendous challenges of increasing SAF production and making it available at a competitive price.[28] To push the uptake and supply of SAF, the RefuelEU Aviation proposal sets a binding blending mandate of 5% for 2030, increasing to 63% in 2050, with specific mandates for synthetic fuels. The proposed regulation places suppliers of aviation fuel in the EU under the obligation to ensure that all aviation fuel made available at EU airports contains a minimum share of SAF.[29] To avoid what is dubbed "fuel tankering", whereby excess fuel is carried from, in this case, non-EU airports to reduce the need to refuel at an EU airport, aircraft operators are obliged to uplift 90% of the yearly aviation fuel required at EU airports.[30] Both the aviation fuel suppliers and the aircraft operators have reporting obligations.[31] Based on these measures, EU and non-EU airlines departing from EU airports have no choice but to refuel with SAF-blended fuel due to the SAF-mandate of the fuel provided at these airports. Although the proposed Regulation makes no distinction between EU and non-EU aircraft operators, it is unclear how fuel tankering by non-EU operators can be avoided. With the increased environmental awareness, the practice of fuel tankering has become more questionable and the risk of it happening must also not be over-estimated.[32]

Nevertheless, there remains a risk of a competitive disadvantage for EU airlines and airports, caused by the extra fuel costs and increased ticket prices in situations where an EU airline, subject to the uplift of aviation fuel at EU airports, competes on a similar long-haul flight route with a non-EU airline, connecting via a non-EU hub airport, where there is no obligation to tank the more expensive SAF-blended fuel. Take, for instance, a Turkiye Airline flight from Amsterdam, the Netherlands, to Tokyo, Japan, via Istanbul Airport, Turkey; Turkiye Airlines must only buy the more expensive SAF-blended fuel at Schiphol for the leg between Amsterdam and Istanbul and can refuel cheaper conventional fuel at Istanbul for the second part of its journey. EU airlines operating direct or indirect flights via an EU hub must use the SAF-blend on a much more significant portion of their flights to the same destination. Similarly, transfer passengers of EU airlines passing through an EU hub may be more likely to switch routes with non-EU airlines through non-EU hubs. For instance, a passenger from Delhi Airport, India, en route to New York City, Unites

28. See, Impact Assessment (SWD(2021) 633, SWD(2021) 634 (summary)) accompanying a Commission proposal for a regulation of the European Parliament and of the Council on ensuring a level playing field for sustainable air transport, COM(2021) 561, section 2.2.
29. Art. 4, Proposal for a Regulation on ensuring a level playing field for sustainable air transport, COM(2021) 561. 2021/0205(COD).
30. Ibid. Art. 5.
31. Ibid. Art. 7 and 9 respectively.
32. See, for more information, Aviation Intelligence Unice, Think Paper #1, Fuel Tankering: economic benefits and environmental impact, June 2019, EUROCONTROL.

States, can fly via Doha, Qatar, and avoid the higher ticket costs associated with the SAF-blended fuel obligation.

2.2.2 Revision of the Energy Taxation Directive

Traditionally, the aviation sector benefits from a privileged tax regime where aviation fuel is exempted from taxation. In international air transport, the Convention on International Civil Aviation of 1944 (the Chicago Convention) only explicitly exempts fuel already *on board* an aircraft transiting foreign airspace.[33] Pursuant to provisions laid down in Air Services Agreements (ASAs), it is common practice to extend this exemption to fuel taken on board, i.e. tanked, based on reciprocity.[34] This practice results from the many bilateral air services agreements between States that explicitly exempt fuel taxation.

Within the EU, the Energy Taxation Directive (ETD) of 2012,[35] also exempts aviation from taxation of aircraft fuel by pointing at "international agreements", that is, ASAs, on this subject and the need to maintain the competitive position of EU air carriers. It left the door open for the EU States to "limit the scope" of the tax fuel exemption to international and intra-Community transport between them or waive the exemption in their bilateral air services agreements.[36] None of the EU States has used this option on their own account. In its proposal for the ETD Revision of 2021,[37] the Commission proposes to remove tax exemptions, such as the one for aviation, and stop the disadvantageous tax treatment of emerging fuels like biofuel. [38] Under the ETD Revision, Members States will have to apply a set minimum tax rate to energy products and electricity supplied for intra-EU air navigation, which would linearly increase during a transitional period of 10 years. Pursuant to ASAs with third countries referred to above, the obligation to apply a minimum tax rate to fuel only covers intra-EU flights, that is, flights between two airports located within the 27 Member States of the EU, including domestic flights, and not flights to third countries, either to or from an EU-airport and to cargo-only operations. [39]

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33. Article 24, Convention on International Civil Aviation, done at Chicago, 1944.
34. See, ICAO's Policies on Taxation in the Field of International Air Transport, 3rd Edition, Doc 8632.
35. EU Council Directive 2003/96 *restructuring the Community framework for the taxation of energy products and electricity* (Energy Taxation Directive).
36. See, Art. 14 of Directive 2003/96 (ETD of 2012), in conjunction with Consideration 23.
37. Proposal for Council Directive restructuring the Union framework for the taxation of energy products and electricity (Energy Taxation Directive, ETD) (COM(2021) 563 final), or ETD Revision.
38. See, Consideration (21) of the ETD Revision.
39. Art. 15 of the ETD Revision.

A fuel tax can contribute to the realisation of the 'internalisation' of external environmental damage in the cost price.[40] This puts a fairer price on tickets and may stimulate airlines to use more fuel-efficient aircraft or more sustainable fuels. The latter effect is, however, less incentivising in a market where such alternatives are not widely available yet, as is the case for sustainable alternatives to jet fuel. Since the ETD Revision only sets a minimum tax rate for fuel, Member States are allowed to impose higher tax rates. This could undermine the internal EU market's effectiveness for air transport and even lead to 'tankering' practices within the EU. Airlines also argue that the EU ETS, discussed in the next section, already puts a price on aviation emissions and that the ETD Revision leads to double taxation.[41] In terms of competitiveness, while the fuel tax, in principle, treats all carriers in the same manner, it affects EU carriers most as its application is limited to intra-EU flights where non-EU airlines are only in exceptional cases permitted to operate these so-called fifth-freedom services within the EU.[42] Nevertheless, the measure does have a distortive effect on competition in the long-haul market for transfer passengers as 'feeder' flights within the EU become more expensive. For instance, on a service from Barcelona, Spain, to Singapore, via Frankfurt, Germany, the fuel tax would apply to the stretch between Barcelona and Frankfurt. A non-EU carrier, for instance, Emirates, offering a service via its hub at Dubai Airport, will not have to pay a fuel tax. Although the example given may not be so much of a detour regarding flight distance, it can still lead to more carbon leakage if the non-EU airline uses less sustainable fuel than its European competitors.

2.2.3 Adaption of the EU ETS Regime for Aviation

The EU Emission Trading Scheme (EU ETS)[43] is the largest multi-national greenhouse gas (GHG) cap and trade scheme. The EU ETS proceeds from trade in allowances of GHG emissions and sets an absolute (declining) cap on such emissions caused by concerned activities in a number of industries. For aviation emissions, the EU did not want to await global consensus on this matter and launched the EU ETS Directive 2008/101,[44] (from now on referred to as the EU ETS Aviation Directive) to include aviation activities in the scheme for GHG allowance trading within the EU.

40. See, EU *Study on the taxation of the air transport sector*, Ricardo (July 2021).
41. See, A4E Position Paper, The Fit for 55 Package: Summary of the positions of Airlines for Europe, Brussels, January 2022.
42. The EU has, so far, only concluded comprehensive air transport agreements allowing such fifth freedom flights for the carriage of passengers with the US and Canada and through a horizontal agreement with Singapore. See also section 4.2.
43. EU Directive 2003/87 *establishing a scheme for greenhouse gas emission allowance trading within the Community*, as variously amended as to which see below.
44. EU Directive 2008/101, *amending Directive 2003/87/EC so as to include aviation activities in the scheme for greenhouse gas emission allowance trading within the Community,* as amended by Directive 2009/29.

As of 1 January 2012, all flights arriving at or departing from an airport located in an EU State are included within the scope of the EU ETS Aviation Directive. Hence, flights within the European Economic Area (EEA) and from a point in a third State to a point in the EEA were to be subject to the ETS regime. Although the EU Court of Justice approved this extra-territorial application, the move of the EU was met with opposition by third States.[45] To not further escalate the frictions, the EU Council and Parliament decided on 26 April 2013 to 'stop the clock' and temporarily exempt international flights from some of the EU ETS obligations.[46] The suspension lasted until 31 December 2023 to facilitate the operationalisation of CORSIA.

With the FF55 legislative package, the Commission proposes to adapt the EU ETS for aviation from 2024 onwards.[47] The Commission suggests continuing to apply EU ETS on intra-EEA routes, including the UK and Switzerland, beyond 2024 and implementing the CORSIA scheme for EU-based carriers on routes to third countries. [48] European Parliament has put on the table applying the EU ETS to all flights departing the EU/EEA.[49] Many articles have been written about the scope of the EU ETS and its relationship with CORSIA,[50] and such analysis is, therefore, not included in this article. Moreover, at the time of writing, the final scope of the proposal is under interinstitutional negotiations between the Council, Parliament and the Commission. There are, however, several points relevant to note within the context of this article.

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45. *See*, CJEU in Case C-366/10, *Air Transport Association of America*, *American Airlines Inc.*, *Continental Airlines Inc.*, *United Airlines Inc.* v. *Secretary of State for Energy and Climate Change*, decision of 21 December 2011.
46. *See*, EU Decision 377/2013, and EU Regulation 2017/2392, amending Directive 2003/87/EC *to continue limitations of scope for aviation activities and to prepare to implement a global market-based measure from 2021*.
47. Proposal for a Directive *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.
48. Proposal for a Directive *amending Directive 2003/87/EC establishing a system for greenhouse gas emission allowance trading within the Union, Decision (EU) 2015/1814 concerning the establishment and operation of a market stability reserve for the Union greenhouse gas emission trading scheme and Regulation* (EU) 2015/757, COM(2021) 551 final, 2021/0211(COD).
49. Report 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)).
50. See, for instance, Mendes de Leon, '*Enforcement of the EU ETS: The EU's Convulsive Efforts to Export its Environmental Values*', Air & Space Law 37, No. 4 & 5 (2012), 287–306, and Erling, '*How to Reconcile the European Union Emissions Trading System (EU ETS) for Aviation with the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA)?,*' Air & Space Law 43, No. 4 & 5 (2018): 371–386.

From an EU perspective, the price signals provided by CORSIA are well below the EU ETS carbon price.[51] Thus, the CORSIA measures would only marginally remedy the climate impact of international flights, from points in the EU to points in third States and *vice versa*. The lower carbon pricing level within CORSIA also means a critical cost difference compared to the EU ETS scheme, contributing to competitive distortion between EU-based and non-EU-based carriers and carbon leakage. In practice, this means that on a flight from Lisbon, Portugal, to Delhi, India, via Paris, France, the more expensive ETS scheme applies between Lisbon and Paris, and CORSIA would apply between Paris and Delhi. In comparison, Qatar Airways would apply CORSIA on its flights from Lisbon to Doha and from Doha to Delhi. Because the EU ETS is already in play, EU airlines have been granted 'free allowances,' since 2012 to maintain a level playing field and 'fair competition' in relation to their non-EU competitors. The remaining certificates must be bought on the market. The discussions around the EU ETS revision currently focus on phasing out the free allowances for aviation much quicker, as early as 2025, if the Parliament has its way, instead of the Commission's proposal for 2027. In the five sectors where carbon leakage is deemed the greatest risk, the CBAM is proposed as an alternative to the free allowances, with the phasing out of the latter aligning with the phasing-in of the CBAM.[52] While it is not certain if a proposal for a CBAM for aviation will eventually see the light of day, without one, there is no similar mitigation for the loss of free allowances for the air transport sector.

Table Overview - Summary of proposed FF55 measures

	Indirect flight		***Direct flight***
EU carrier	**Stockholm - Amsterdam**	**Amsterdam – Tokyo**	**Stockholm - Tokyo**
	Blending mandate SAF Fuel Tax EU ETS	Blending mandate SAF No Fuel Tax CORSIA	Blending mandate SAF No Fuel Tax CORSIA
Non-EU carrier	**Stockholm - Istanbul**	**Istanbul – Tokyo**	**Stockholm - Tokyo**
	Blending mandate SAF (*possibly tankering*) No Fuel Tax CORSIA	No Blending mandate No Fuel Tax CORSIA	Blending mandate SAF (*possibly tankering)* No fuelTtax CORSIA

51. See, Impact Assessment Report accompanying the document Proposal for a Council Directive restructuring the Union framework for the taxation of energy products and electricity (recast), 2021 SWD(2021) 641 final at page 18 and Annex 7.

52. See, Proposal for a Directive *amending Directive 2003/87/EC establishing a system for greenhouse gas emission allowance trading within the Union, Decision (EU) 2015/1814 concerning the establishment and operation of a market stability reserve for the Union greenhouse gas emission trading scheme and Regulation* (EU) 2015/757, COM(2021) 551 final, 2021/0211(COD), recital 30.

The following section will first explain what a CBAM is, what the hurdles are to applying such a mechanism to aviation and in which form it can be applied. Section 4 will then consider a CBAM in light of international relations.

3. The Carbon Border Adjustment Mechanism

The FF55 package encompasses a proposal for a regulation establishing a Carbon Border Adjustment Mechanism,[53] henceforth referred to as the 'CBAM Regulation (2021).' For the time being, it only applies to trade in goods. This section will first explain CBAM as applied to trade in goods before dealing with whether and how a similar mechanism can be adapted for application to the operation of air services.

The Carbon Border Adjustment Mechanism, also known as border carbon adjustments (BCAs), is a familiar concept in world trade but has not often been implemented. The issue it addresses is simple; when products are produced under less stringent conditions in terms of GHG emissions, they are less expensive to manufacture and, therefore, more attractive for importers and consumers. To avoid production being moved to countries with lower standards and having these less environmentally friendly goods imported into the country, a CBAM aims to correct the price difference resulting from the different standards between the domestically produced and imported goods. Such price differences are expected to amplify in the years to come,[54] hence, discussions on a CBAM are gaining ground. This section will focus on the CBAM Regulation as proposed in the EU.

3.1 CBAM as applied to trade in goods

A CBAM has been defined as "a measure applied to traded products that seeks to make their prices in destination markets reflect the costs they would have incurred had they been regulated under the destination market's greenhouse gas emission regime."[55] The definition clearly distinguishes applicability to trade in *goods* and not to *services*. In other words, the price of goods is adjusted when crossing the border to match the costs of domestic goods in terms of their GHG production. In doing

53. EU Commission, Proposal for a Regulation of the European Parliament and of the Council establishing *a carbon border adjustment mechanism*, COM(2021) 564 final, dated 14.7.2021.

54. OECD, *Climate Policy Leadership in an interconnected world*: *What Role of Border Carbon Adjustments*? (2020), at section 30.

55. Cosbey, A. et al. (2012), A Guide for the Concerned: Guidance on the elaboration and implementation of border carbon adjustment, International Institute for Sustainable Development, see: https://www.iisd.org/library/guide-concerned-guidance-elaboration-and-implementation-border-carbon-adjustment (last visited: 16 Augustus 2022).

so, CBAM maintains a level playing field for manufacturers and deters practices that lead to carbon leakage.

So how does CBAM work? The proposal for a CBAM requires importers to purchase carbon emissions certificates for imports of goods not manufactured under emissions standards similar to those of the EU. By applying a carbon price to imported goods to match the carbon price applied to products manufactured in the EU, the CBAM foresees an EU import levy on specified products that internalises the costs of GHG emissions in the price importers pay for these imported goods. The EU Commission has identified six options for its implementation of CBAM.[56] Under the most effective option in terms of impact on reducing carbon leakage, importers of goods must submit CBAM certificates when importing goods into the EU and purchase those certificates at a price corresponding to that of the EU ETS allowances, thereby mirroring the price of EU ETS allowances to ensure a coherent approach to the pricing under the EU ETS. The "operator" of a -fixed-installation where goods are produced must make their verified embedded GHG emissions from the production of goods available to authorised declarants.[57] These "declarants" verify the emissions of the goods that are being imported and request compensation for the CBAM certificates.[58] National authorities of EU States sell CBAM certificates to such declarants according to specified procedures.[59] When authorised by the competent customs authorities, the declarant may release the certified goods for circulation in the EU market.[60] Fines may be imposed in case of non-compliance by the declarant of the procedures laid down in the Proposed CBAM Regulation (2021).[61]

The proposed regime with importers, declarants, and operators of plants as actors and liable persons has been derived from trade in *goods* and the General Agreement on Tariffs and Trade (GATT) of the World Trade Organization (WTO), of which the EU and its Member States are a party. The proposed CBAM Regulation (2021) purports to seek compliance with these WTO commitments, and while arguments can be made against this claim, a further discussion of these falls outside the scope of this article. Since the proposal involves the management of customs and import regulations and trade agreements with third States, the EU Commission proceeds

56. EU Commission, Proposal for a Regulation of the European Parliament and of the Council establishing *a carbon border adjustment mechanism*, COM(2021) 564 final, at pages 7-8.
57. See, Art. 10 and following of the Proposed CBAM Regulation (2021).
58. See, Articles 7 and 8 of the Proposed CBAM Regulation (2021).
59. See, Articles 20 and 21 of the Proposed CBAM Regulation (2021).
60. See, Article 26 of the Proposed CBAM Regulation (2021).
61. See, Article 25 of the Proposed CBAM Regulation (2021).

from its exclusive competence in the field of trade policy. The question is whether this sole legal basis can be upheld for applying a CBAM to aviation because the regulatory context for trade in international air services and protection of the environment is different; in external aviation relations, as well as in environmental protection, the EU and its Member States share competencies.[62]

3.2 Applying CBAM to aviation

In accordance with the review clause included in the Proposal for a CBAM Regulation, the Commission will have to assess the possibility of expanding the proposal's scope to emissions of transportation services.[63] Whether the CBAM Regulation can be applied to air transport requires more legal and practical consideration.

First, the CBAM regime, as explained above, is designed for the trade in *goods* that are manufactured at fixed installations and imported into a State by an importer. Air transport is a matter of trade in air *services* on which passengers and goods are carried on a mobile asset, namely, an aircraft. While airports can arguably be considered 'fixed installations,' they are not responsible to compensate for CO2 emissions produced by the aircraft they are obliged to admit.[64] The provision of air services by carriers does not proceed from 'fixed' or 'stationary installations' but uses, on the contrary, mobile aircraft to provide these services. International air transport is the business of crossing borders, and the essence of aircraft being moveable assets renders the essence of the operation of air services 'flexible' in the sense that flights can be moved, rerouted, or even substituted. This means that air passengers can choose different services and routes to get from fixed-point A to point B, including, where applicable, the option to travel with an EU carrier or a non-EU carrier or via any intermediate point. Similarly, carriers can choose to change or provide different services. This interchangeability of flights provides a stark contrast to fixed goods moved across a border by an importer and subject to customs checks and clearances before reaching the buyer or consumer. In the EU ETS regime, by analogy, the airline is the responsible legal person to account for the

62. See, section 3 of the 'Subsidiarity Grid' of EU Commission, Staff Working Document Impact Assessment Report, Accompanying the document Proposal for a regulation *establishing a carbon border adjustment mechanism*; COM(2021) 564 final; SWD(2021) 643 final, section 2.2.

63. EU Commission, Proposal for a Regulation of the European Parliament and of the Council *establishing a carbon border adjustment mechanism*, COM(2021) 564 final, Art. 30.

64. See, for instance, Art. 8.24(a)(1) of the Dutch Aviation Act ('*Luchtvaartwet*'), pursuant to which the operator of the airport is obligated to admit traffic in accordance with applicable regulations. EU Regulation 1008/2008 on *common rules for the operation of air services in the Community* reflects a similar approach towards the position of the operator of the airport.

emissions of the aircraft used to provide its service. A CBAM for aviation could be adjusted accordingly, but there is an important caveat.

A second divergence to consider is that air services fall outside the scope of the WTO's General Agreement on Trade in Services (GATS), the counterpart for services of the GATT. The GATS does not apply "to measures affecting: (a) traffic rights, however, granted; or (b) services directly related to the exercise of traffic rights […]," [65], i.e., the operation of air services. Consequently, simply identifying the airline as the importer of the service and applying the CBAM as applied to goods, by analogy, to air services contradicts the aviation exemption from GATS and the special regime governing international air transport. In this special regime for aviation, air services are regulated by the Chicago Convention on international civil aviation (1944), dictating that no international air service to another State may be operated unless that other State has expressly agreed to the conditions for the operation of such services.[66] That is why air services are performed pursuant to a web of thousands of Air Services Agreements (ASAs) concluded by the 193 States parties to this convention. This means, in short, that the operation of international air services must be expressly permitted by the States that are party to the ASAs. These agreements are, however, silent on CBAM-like obligations or other environmental measures.

Next, how the measure will be defined, under international law, in a potential CBAM Regulation for aviation may also have consequences. The additional expenses can either be put on top of the ticket price as a charge or a tax or included in the ticket price through a levy. Suppose the measure is identified as a tax, in that case, it will be subject to the provisions of the Chicago Convention and established practice that exempts aviation from taxation, as well as the conditions on this subject that are agreed upon and laid down in the myriad of ASAs concluded by the EU,[67] and its Member States. If the measure is deemed a custom duty or charge, WTO provisions and procedures are in place and the measure may be inconsistent with general trade principles.[68] Or it can be portrayed as an internal measure "relating to the admission to or departure" from national airspace, in this case that of an EU/EEA State, or on "the operation and navigation of such aircraft while within

65. See, General Agreement on Trade in Services, Annex on Air Transport Services, Art. 1.3.
66. See Article 6 of the Chicago Convention.
67. See the agreements with the US (2007/2010), Canada (2009), Qatar (2021) and Oman (2021).
68. See, CATO Briefing Paper dated 9 August 2021, Nr 125, prepared by Prof. James Bacchus, *Legal Issues with the European Carbon Border Adjustment Mechanism*, at 3; available on the internet.

its territory."[69] Navigational rules are only valid in national airspace and cannot be extended to include the flight segment above non-EU/EEA territory.

And there lies the final crux. A CBAM for aviation would be complementary to the EU ETS and would be specifically designed to reinforce this regime for international traffic, including that beyond EU borders. The CBAM is meant to substitute the free allowances of EU carriers under the current EU ETS regime and bring it in line with a revised EU ETS cap. Under a CBAM for international aviation, third-country carriers benefiting from lower environmental standards outside the EU would be required to buy the CBAM certificates to mitigate the cost differences and thus pay an equal 'carbon price' for their flights compared to their EU counterparts. To calculate the cost difference, CBAM certificates would need to consider the flight emissions of segments outside EU airspace, making the measure extra-territorial in scope.

How the above considerations can be contemplated in a CBAM for aviation requires further research as the design of such a mechanism for the application to air transport has yet to be determined. However, the big remaining question is how the measure can be implemented. The following section will investigate two possible avenues: a unilateral introduction or through international agreement and take a closer look at the legal and political implications.

4. CBAM and International Relations

With its ambitious environmental agenda for aviation, the EU Commission sets a high but necessary target for reducing GHG emissions. As analysed in section 2 of this article, the FF55 measures for air transport will significantly impact carriers situated in the EU who, by virtue of their establishment, will have to adhere to said measures. To mitigate these environmental cost differences with airlines from outside the EU, the EU can attempt to impose a CBAM unilaterally on third-country carriers or by reaching international agreement with other countries about applying CBAM or on other environmental targets.

4.1 Unilateral Application

The Chicago Convention only allows States to apply domestic rules and regulations *internally* relating to the admission or departure of aircraft from national airspace and their operation and navigation while within its territory.[70] An application

69. See, Article 11 of the Chicago Convention.
70. Ibid.

beyond national borders, i.e. in the territory of another contracting State, would be contrary to the principle of complete and exclusive sovereignty over a State's own airspace.[71] Using Article 11 of the Chicago Convention to justify the CBAM, one could argue that aircraft emissions are inherent to the operation of aircraft and that the environmental measure applies upon admission into the combined airspaces of EU States, henceforth 'EU-airspace'. In accordance with Article 11, such measure would, however, need to apply without distinction as to nationality and thus cannot be used to oblige only non-EU carriers to purchase CBAM certificates. Perhaps even more important is whether the regime can be extended to include the flight segment above non-EU territory and whether third States will accept such unilateral action by the EU. Past experiences offer no conclusive answer in this regard. When the EU ETS regime was announced in 2008, the same legal basis, Article 11 of the Chicago Convention, was used to "[…] reserve[d] the right under the Chicago Convention to enact and apply market-based measures on a non-discriminatory basis to all aircraft operators of all States providing services to, from or within their territory."[72] As mentioned in section 2.2.3. of this article, the EU's move was met with resistance. In December 2009, three major US airlines and the Air Transport Association of America (ATA) submitted a claim about the legality of the measures, concerning the territorial jurisdiction of the EU, to a court in the UK, which passed these questions to the Court of Justice of the EU. The court ruled that EU legislation "may be applied to an aircraft operator when its aircraft is in the territory of one of the Member States"[73] and:

> "As for the fact that the operator of an aircraft in such a situation is required to surrender allowances calculated *in the light of the whole of the international flight* that its aircraft has performed or is going to perform from or to such an aerodrome, it must be pointed out that, as European Union policy on the environment seeks to ensure a high level of protection in accordance with Article 191(2) TFEU, *the European Union legislature may in principle choose to permit a commercial activity, in this instance air transport, to be carried out in the territory of the European Union only on condition that operators comply with the criteria that have been established by the European Union and are designed to fulfil the environmental protection objectives which it has set for itself*, in particular where those objectives follow

71. Article 1 of the Chicago Convention.

72. See, Consideration 9 of the Preamble of Directive 2008/101 amending EU Directive 2003/87.

73. See, CJEU in Case C-366/10, *Air Transport Association of America*, *American Airlines Inc.*, *Continental Airlines Inc.*, *United Airlines Inc.* v. *Secretary of State for Energy and Climate Change*, decision of 21 December 2011, paragraph 124.

> on from an international agreement to which the European Union is a signatory, such as the Framework Convention and the Kyoto Protocol."[74] (italics added)

The reactions to the Court's decision that the EU ETS proposal did not infringe international law were vehement on the policy level. Important aviation States and trading partners of the EU and its Member States have criticised these proposals, which they consider unilateral actions infringing international law. To avoid retaliation measures, international flights are temporarily exempted from the EU ETS until 31 December 2023. But there is a different momentum now. The urgency for climate measures is much higher on the agenda than it was 10-15 years ago. This will significantly support the discussion of a potential CBAM for aviation, even beyond the EU. Nevertheless, it is doubtful that this time third States will accept without protest an environmental measure with 'extra-territorial' effects that the EU unilaterally imposes. They will likely argue that for such actions, international agreement is required, as to which see the next section, that ICAO is the appropriate forum for this and that the CORSIA scheme already has a global reach. To justify the 'export' of its environmental norms, the EU may argue, in return, that CORSIA standards are not strong enough to achieve the targets of the Paris Agreement and raise concerns about the lack of legal force of the ICAO standards and their relatively weak enforceability.

Other EU legislation aimed at reducing competitive disadvantages between EU and non-EU carriers, such as Regulation 2019/712 on safeguarding competition in air transport and its predecessor,[75] offer enforcement mechanisms, but these have not yet been applied and do not offer practical insight into the enforceability of such measures vis-à-vis third-country carriers, especially in the context of environmental measures.

4.2 International Agreement(s)

The most legally sound option to implement environmental measures in aviation would be to reach international agreement at the level of ICAO, for instance, through strengthening the existing CORSIA scheme or adopting a new treaty. On the international level, States will discuss adopting a Long-Term global Aspirational Goal (LTAG) for reducing CO2 emissions during the 41st Session of the ICAO General Assembly in September and October 2022. Notwithstanding the importance of agreeing on a global goal, a High-Level Meeting on the feasibility of

74. Ibid, paragraph 128.

75. Regulation (EU) 2019/712 of the European Parliament and of the Council of 17 April 2019 on safeguarding competition in air transport, and repealing Regulation (EC) No 868/2004.

an LTAG for international aviation CO_2-emissions reductions concluded in July to recommend that:

1. ICAO and its Member States are encouraged to work together to strive to achieve a collective long-term global aspirational goal for international aviation (LTAG) of net-zero carbon emissions by 2050, in support of the Paris Agreement's temperature goal, *recognizing that each State's special circumstances and respective capabilities* (e.g., the level of development, maturity of aviation markets, sustainable growth of its international aviation, just transition, and national priorities of air transport development) *will inform the ability of each State to contribute to the LTAG within its own national timeframe*.
2. While recognizing that the LTAG is a collective global aspirational goal, and *it does not attribute specific obligations or commitments in the form of emissions reduction goals to individual States*, each State is urged to contribute to achieving the goal in a socially, economically and environmentally sustainable manner *and in accordance with national circumstances*.[76] (Italics added)

As already indicated by the inclusion of 'aspirational' in its title, these conclusions confirm that the LTAG is a call to action and does not present binding targets or timeframes. Should the EU wish to press the issue further with more concrete milestones, it must consider other routes, for instance, the conclusion of separate international agreements between the EU and third States and including a CBAM in the existing Air Services Agreements of the EU and its Member States with third States. Combined, the EU States have concluded many bilateral ASAs with third States. A large portion of these ASAs has been amended through so-called 'horizontal agreements' to conform with new developments in EU law concerning the EU nationality of carriers.[77] The EU and its Member States have also concluded various categories of comprehensive or vertical Agreements with certain States, encompassing not just traffic rights but all aspects of air transport, including environmental protection. The last part of this article will analyse if and to what extent these different types of ASAs have been used or can contribute to implementing environmental measures like the CBAM. The last-mentioned category, *comprehensive agreements*, provides a prominent platform to negotiate more stringent environmental measures to be applied between the EU and the

76. ICAO, Doc 10178, Report of the High-Level Meeting on the feasibility of a Long-Term Aspirational Goal for International Aviation CO2 Emissions Reductions, Conclusions, Montréal, 19-22 July 2022.

77. Carriers in the EU can be majority-owned and effectively controlled by an accumulation of different EU nationalities, ex Art. 4(f) of Regulation 1008/2008.

other party. The first of its kind and most used agreement between the EU and US stipulates:

> "When a Party *is considering proposed environmental measures* at the regional, national, or local level, it should evaluate possible adverse effects *on the exercise of rights* contained in this Agreement, and, if such measures are adopted, *it should take appropriate steps to mitigate any such adverse effects*. At the request of a Party, the other Party shall provide a description of such evaluation and mitigating steps."[78] (emphasis added)

Hence, if a proposed environmental measure will have an adverse effect on the operation of international air services, and the effect cannot be mitigated, an agreement must be reached through a Joint Committee. None of the vertical agreements that have been concluded with the US (2007/2010), Canada (2009), Qatar (2021) and Oman (2021) explicitly refer to the application of the EU ETS regime but instead foster cooperation at ICAO.[79] Even in one of the most recent agreements with Qatar, the parties agree to cooperate on implementing rules for the development of CORSIA and "recognise the need to take appropriate measures to prevent or otherwise address the environmental impacts of air transport *provided that such measures are fully consistent with their rights and obligations under international law*"[80] (italics added).

The EU could start negotiations to amend these agreements to include the CBAM or other environmental measures, like the taxation of aircraft fuel. The same can be explored in the context of the neighbourhood policy, where the EU and its Member States have concluded comprehensive agreements with Balkan and Mediterranean States, creating a Common Aviation Area encompassing the EU and these areas. The question remains whether these States are willing to follow the EU's stringent environmental policy.

In the context of *horizontal agreements*, when these ASAs are amended to substitute the traditional nationality clause of EU States with the 'EU nationality' clause, there is a window of opportunity to include environmental measures in the negotiations. This would, however, require a new negotiating mandate since the existing mandate

78. EU – US Agreement on Air Transport of 2007, as amended in 20210, Article 15(2).
79. Ibid, see, Attachment C - Joint Statement on Environmental Cooperation.
80. Agreement on Air Transport between the European Union and its Member States on the one part, and the State of Qatar, of the other part (2021), Article 16.

only covers designation issues.. A review of the 100s of horizontal agreements falls outside the scope of this article, but a recent one conducted with one of the EU's most important trading partners, namely China, is perhaps illustrative of this option; it does not have a specific clause on environmental protection.[81] In the case of *horizontal and traditional ASAs*, it will be a time-consuming effort to negotiate amendments to change these ASAs for implementing the CBAM and, generally, to align them with the ait transport provisions of the FF55 package. Unlike the more liberal comprehensive agreements, the horizontal and traditional agreements often contain clauses that regulate the volume of traffic between the two parties, limiting the frequency of services and capacity of different aircraft types. These clauses also include a prohibition of further limiting the volume of air traffic, except for limited reasons:

> "Neither Contracting Party *shall unilaterally limit the volume of traffic, frequency or regularity of servic*e, or the aircraft type(s) operated by the Designated Airline(s) of the other Contracting Party, except as may be required for customs, technical, operational, or *environmental reasons* under *uniform conditions* consistent with Article 15 of the [Chicago] Convention"[82] (italics added).

It is a matter of interpretation whether a CBAM can be regarded as a customs or environmental measure under which the number of frequencies or aircraft types may be reduced. Such an interpretation could potentially reduce the agreed capacity in case of non-compliance with the EU's environmental standards through a CBAM. However, without any further information on how a CBAM for aviation will be designed and, hence, qualified and an analysis of the environmental protection clauses in specific ASAs, it is premature to articulate opinions on the likelihood that a CBAM can be implemented this way.

5. Concluding Remarks

Under the EU Green Deal of 2019, the 'Fit for 55' Package, presented in July 2021, includes ambitious proposals for the air transport industry to reduce GHG emissions by 55% in 2030 compared to their 1990 levels. While industry actors underpin the importance of environmental measures to combat climate change, concerns are

81. Agreement between the European Union and the Government of the People's Republic of China on certain aspects of air services (2019).

82. See, ICAO Doc 9587 – Annex 5, Template Air Services Agreement, Article 16 (cont'd).

raised that the accumulative effect of the FF55 measures will disproportionally hit EU network carriers servicing third countries compared to their non-EU counterparts; the additional costs associated with compliance with the FF55 measures will lead to cost differences and a distortion of competition in these markets.

More importantly, however, cost differentiation may potentially result in 'carbon leakage' if carriers decide to offer different routes and passengers choose to fly non-EU airlines or fly different routes that are not or less covered by the EU's environmental measures. Consequently, the FF55 package does not achieve its full carbon reduction potential without balancing efforts. Paradoxically, it may even lead to carbon leakage and more CO2 emissions in specific markets instead of fewer emissions.

Can a Carbon Border Adjustment Mechanism provide a solution? Much will depend on how the current CBAM proposal designed for the trade in *goods* would be adapted for application to air transport *services* while respecting international trade standards. Would a proposal apply to EU airspace only or be extra-territorial in scope, to flight segments beyond EU borders, and if so, to the totality of the flight, or only to flight segments arriving in or departing from an EU airport? The latter may facilitate non-EU carriers with hubs near EU borders. However, whether more traffic will flow via, for instance, Istanbul will also depend on the Air Services Agreements that, in this case, Turkey has concluded with other states. Traditional bilateral ASAs often regulate and limit capacity and frequency and, thus, may not always allow for the additional flights required to facilitate an increased demand. In light of these capacity constraints, one could argue that the traditional system of bilateral air services offers some protection against 'carbon leakage', but only insofar States have not liberalised air traffic between them, which is contrary to the EU's Open Skies policy.

A perhaps more significant obstacle is the implementation of a CBAM. The 'royal way' under air law, through international agreement at the level of ICAO or amendments of ASAs, will be time-consuming and may not yield tangible results in the short time frame that the urgency of climate measures requires. Nevertheless, many States regard or have started to recognise climate change as an existential threat, which may facilitate new momentum to start discussions or negotiations on accepting a CBAM or even just present a CBAM to inspire other States to follow suit. A unilateral imposition of CBAM by the EU may face questions and possibly resistance from third States, as exemplified by the opposition to applying the EU-ETS scheme outside the EU. Third states will point to ICAO and CORSIA as the appropriate forum and the best route for international aviation to protect the environment in a global effort. While progress is being made on this platform, the

awaited Long-Term global Aspirational Goal for reducing CO2 emissions in aviation does not present binding targets and timeframes to individual States. The different approaches of the two regimes, i.e. cap and trading emissions of the EU-ETS and offsetting emissions by CORSIA, further complicate the discussion, and a solution, at the international level.

Whether the EU can push its environmental norms beyond EU borders by applying its environmental measures, including but not limited to EU ETS and CBAM, and whether and how mechanisms such as CBAM can be applied to aviation to mitigate cost differences must be considered coherently and comprehensively while avoiding duplication of efforts. The results of the upcoming ICAO General Assembly, as well as the outcome of the interinstitutional negotiations in the EU on applying the EU ETS globally, can influence the discussion and scope of a potential CBAM for aviation. In case the EU decides a CBAM for aviation is necessary, more research should be conducted on the possible design and evaluating the legal and practical implications of its application outside the territory of the EU, including the enforceability of such a measure vis-à-vis third countries.