Fuel Taxation in Aviation

Pathways for reform among COFFIS member states

IISD REPORT

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Executive Summary

Although international aviation contributes approximately 2.4% of global annual CO_2 emissions, fuel used in this sector is rarely taxed. A tax on aviation fuel could support the sector's climate targets by promoting greater fuel efficiency, encouraging the uptake of sustainable aviation fuels, and ensuring fairer competition with less emission-intensive transport modes, such as rail and road.

The lack of taxation of international aviation fuel is due to political resistance. The policy of the International Civil Aviation Organization (ICAO) consistently promotes open skies and a unified global aviation market, which has established the presumption of tax exemptions for international aviation as the global norm. Reversing this trend faces practical challenges, as many states fear that introducing a tax could undermine the competitiveness of their airports and lead to route shifts, commonly referred to as carbon leakage.

The 1944 Convention on International Civil Aviation, applicable to all ICAO member states, does not prohibit the introduction of aviation fuel taxes. However, legal barriers may arise from bilateral and multilateral Air Service Agreements (ASAs).

This paper examines 32 ASAs concluded between member states of the Coalition on Phasing Out Fossil Fuel Incentives Including Subsidies (COFFIS), launched at the 28th United Nations' Climate Change Conference (COP 28) with a ministerial statement,[1] to determine the necessary steps before implementing a tax on the uptake of aviation fuel.[2] None of the reviewed ASAs restricts the taxation of fuel for *domestic aviation*. The ASAs are categorized into four groups based on their treatment of fuel taxation. Only two categories require reform prior to implementing a tax for international flights: (i) agreements containing a full tax prohibition and (ii) those imposing non-discrimination or similar clauses.

For European Union (EU) member states, legal barriers primarily stem from Article 14.1 (b) of the Energy Taxation Directive (ETD). However, if the EU enters an international agreement that introduces different fuel tax rules, such an agreement would prevail over the ETD, opening the door for aviation fuel taxation across all EU member states.

The most effective way to overcome these legal barriers, for EU and non-EU states, is through a Joint Agreement among a coalition of the willing. States have used similar approaches to successfully amend large numbers of bilateral treaties in other areas, such as investment and tax law.

This paper also quantifies emissions associated with three ASAs concluded by the United Kingdom and estimates the tax revenue potential if a fuel tax were implemented for these routes.

[1] Initial signatory states in 2023 at COP 28 were Antigua and Barbuda, Austria, Belgium, Canada, Costa Rica, Denmark, Finland, France, Ireland, Luxembourg, the Netherlands, and Spain. It has since added five new members: Colombia, New Zealand, the Republic of the Marshall Islands, Switzerland, and the United Kingdom.

[2] Unless mentioned otherwise, the term fuel tax is understood to refer to taxes on aviation fuel loaded at departure airports, excluding fuel already onboard upon arrival.

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1.0 Background

The aviation industry has contributed approximately 4% to human-induced global warming and approximately 2.4% of annual global emissions of CO_2 (Klöwer et al., 2021). Despite this significant impact, aviation fuel is seldom taxed. Instead, aviation-related taxes typically take the form of air passenger duties (Aviation Environment Federation, 2024a) or solidarity levies on tickets. An International Institute for Sustainable Development paper published in February 2025 showed that the widespread exemption of international aviation fuel from taxation stems from the International Civil Aviation Organization's (ICAO's) liberalization efforts and is broadly reflected in its policy (Posada et al., 2025). States find themselves trapped in the so-called "prisoner's dilemma"—they hesitate to act alone for fear of undermining the competitiveness of their national airports and airlines and triggering route shifts, often described as carbon leakage.

Taxing fuel at the point of delivery—i.e., fuel loaded locally rather than imported—offers several advantages. It creates incentives for greater fuel efficiency, encourages the use of alternative and less polluting modes of transport where available, and helps level the playing field between aviation and other transport sectors. Importantly, such taxation can also help bring fuel costs closer to the level at which sustainable aviation fuels become economically viable at scale. Revenue generated from a fuel tax could help internalize the external costs associated with aviation emissions.

Aviation fuel taxation also presents a significant opportunity to generate public revenue. The actual amount of revenue depends on the scope of the tax—whether it is applied to domestic flights, international flights, or both. Table 1 provides estimates of potential revenue from taxing fuel used in certain international flights to and from the United Kingdom. The introduction of an aviation fuel tax could generate up to USD 3.1 billion in revenue from the three analyzed routes alone.

Recent legal research has investigated potential barriers to fuel taxation under various international and regional legal frameworks, including the 1944 Convention on International Civil Aviation (Chicago Convention), the EU Energy Taxation Directive (ETD), and the United Kingdom's legal obligations post-Brexit under the EU–United Kingdom Trade and Cooperation Agreement (Opportunity Green, 2024).

The Chicago Convention does not present absolute legal barriers to international fuel taxation. Any perceived constraints are political rather than legal in nature.

In the EU, Article 14.1 (b) of the ETD mandates a complete fuel tax exemption for international flights. This exemption primarily reflects alignment with international policy practices, alongside concerns about maintaining competitiveness (European Commission, 2021). Although the European Commission proposed a revision of the ETD in 2011 to align with EU climate policies (European Commission, n.d.-b), repeated attempts have failed to reach the required unanimity in the Council of the EU (Hodgson, 2025). As tax matters fall under the unanimity voting rules, this reform remains blocked.

Table 1. Potential revenue from the taxation of international aviation fuel the United Kingdom

	Routes analyzed		
	United Kingdom–Antigua and Barbuda	**United Kingdom–Canada**	**United Kingdom–EU**
Passengers in 2024	185,336	3,390,731	163,542,037
Aviation fuel	38–54 megalitres	456–891 megalitres	5,512–11,022 megalitres
Total emissions	0.10–0.14 $MtCO_2e$	1.16–2.27 $MtCO_2e$	14.0–28.0 $MtCO_2e$
Total revenue from a tax of USD 0.52/L	USD 10.0 million to USD 14.2 million	USD 119 million to USD 232 million	USD 1,438 million to USD 2,876 million

Note: Estimates are given a range that considers planes travelling with high occupancy to low occupancy. $MtCO_2e$ = million tonnes of carbon dioxide equivalent.
Source: Authors' calculations.[3]

However, Article 14.2 of the ETD has room for interpretation: EU member states may agree bilaterally to deviate from the tax exemption for intra-EU flights. Furthermore, EU-level international agreements with non-EU parties—such as the EU–United Kingdom Trade and Cooperation Agreement—can override EU directives, creating space for fuel taxation on flights covered by such treaties (Opportunity Green, 2024).

Outside the EU context, legal scrutiny has largely overlooked the broader regime of Air Service Agreements (ASAs).[4] These predominantly bilateral treaties govern key aspects of international air traffic, including market access, security, customs duties, and taxes. The ICAO's World Air Services Agreements database contains nearly 4,000 such agreements and amendments, many of which have remained unchanged for decades (ICAO, n.d.-c).

[3] To estimate the revenue, the following methodology was applied: (1) The number of passengers carried in each route was obtained from the United Kingdom Civil Aviation Authority (2024). (2) The fuel burned per journey and the aircraft used in each route were obtained from the ICAO Carbon Emissions Calculator (ICAO, n.d.-b). In the case of the United Kingdom–EU routes, the fuel consumed in the most popular route between the United Kingdom and each EU country was used as a proxy for all routes between the United Kingdom and that country (e.g., the fuel consumed in the route between London [Heathrow] and Paris [Charles de Gaulle] was applied to all other routes between the United Kingdom and France). This was done to reduce the complexity of the estimation, as there are thousands of routes between the United Kingdom and the EU. (3) The number of journeys completed on each route was estimated by dividing the number of passengers carried in the route over the planes' passenger capacities. This results in a range, as different aircraft models can cover the same route and travel with high or low passenger occupancy, resulting in fewer or more journeys, respectively. (4) The volume of fuel consumed in each route was estimated by multiplying the number of journeys in that route and the fuel consumed in each journey. (5) The revenue was estimated by applying a tax of USD 0.52/L to the volume of fuel consumed and dividing it by two, which assumes that half of the fuel is loaded and taxed in the United Kingdom. The tax rate amounts to 40% of the final price of aviation fuel per litre, same as the fuel duty applied to road vehicles in the United Kingdom (United Kingdom Government, 2025a, 2025b).

[4] The cost of access to ICAO's ASA database has been an impeding factor for such research (Opportunity Green, 2024). See Appendix B for a list of ASAs reviewed and the pertinent text excerpts.

Currently, many states rely on the ICAO's Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) as their primary climate mitigation measure for international flights. It works as a global market-based mechanism to cap CO_2 emissions from international aviation at 2019 levels (ICAO, 2022a). Airlines are required to offset any emissions above this baseline by purchasing carbon credits from approved environmental projects. However, the long-term reliability of CORSIA is uncertain: major aviation states, such as China, Brazil, and Venezuela, are not participating in its voluntary phase (ICAO, 2023) and have expressed reservations about its application (ICAO, 2022b). With CORSIA set to become mandatory in 2027 (and to expire in 2035 [ICAO, 2022a]), there is increasing urgency to identify complementary or alternative climate mitigation policies within ICAO's triennial General Assembly cycle, such as a fuel tax.

This policy brief seeks to provide clarity by examining a sample of 32 ASAs concluded between Coalition on Phasing Out Fossil Fuel Incentives Including Subsidies (COFFIS) member states to identify legal barriers and pathways to reform. While the focus is on the COFFIS sample, the methodology is adaptable and can serve as a blueprint for assessing and reforming ASAs in other jurisdictions.

2.0 Analysis of ASAs

The Chicago Convention lays out the foundational legal framework for international air transport. Article 24 prohibits the taxation of fuel already on board an arriving aircraft from a foreign state, but does not prohibit the taxation of fuel loaded locally—commonly referred to as "at the pump" (Aviation Environment Federation, 2024b).

Some commentators argue that Article 15 of the Chicago Convention, which prohibits "fees, dues or other charges" related to transit, entry, or exit from a foreign territory, could be interpreted as a barrier to fuel taxation (Mendes de Leon & Mirmina, 1997). However, the prevailing view, supported by ICAO policy documents (ICAO, 1996) and legal scholarship (Faber & O'Leary, 2018), is that taxes differ from fees, dues, or charges because they are levied not in exchange for a specific service, but for general revenue.[5] Therefore, Article 15 is not applicable to international aviation fuel taxation and does not constitute a legal barrier to such.

Moreover, the Chicago Convention does not apply to domestic air transport (Faber & O'Leary, 2018), as indicated by its title and repeated references to "international aviation" in its preamble. This means that, absent other restrictions, signatory states are legally free to tax fuel loaded within their territory for both domestic and international flights.

This raises the central legal question: Do other international instruments—particularly bilateral or regional ASAs—create legal barriers to fuel tax taxation, especially among COFFIS member states?

2.1 Categorizing ASAs

The analysis of tax-related provisions across the sampled ASAs revealed four main categories, each reflecting the degree and nature of regulation of the taxation of fuel uptake for international flights:

1. ASAs that do not impose any restrictions or conditions on the taxation of additional fuel intake (three out of 32 ASAs)
2. ASAs that exempt jet fuel uptake from taxation for flights between the contracting states, based on reciprocity (10 out of 32 ASAs)
3. ASAs that explicitly prohibit the taxation of additional jet fuel uptake for international flights (12 out of 32 ASAs)
4. ASAs that require non-discriminatory, national, or most-favoured-nation (MFN) treatment with respect to fuel taxation (four out of 32 ASAs)

[5] Council Resolution on Environmental Charges and Taxes, December 9, 1996, 5th recital: "Noting that ICAO policies make a distinction between a charge and a tax, in that they regard charges as levies to defray the costs of providing facilities and services for civil aviation, whereas taxes are levies to raise general national and local governmental revenues that are applied for non-aviation purposes" (ICAO, 1996).

An additional three ASAs could not be clearly assigned to any of these categories (see 2.2.e. Sui Generis, below), primarily due to ambiguous wording or legal formulations that require further contextualization.

The following sections consider each category in detail and discuss the relevant legal and policy implications for implementing a fuel tax.

2.1.1 No Legal Impediment to Taxing Fuel for International Carriers

Three ASAs in the sample impose no legal restrictions on taxing additional fuel uptake for international flights. While each of these agreements prohibits the taxation of kerosene already on board an arriving aircraft (as per Article 24 of the Chicago Convention), three ASAs stay tacit about taxing fuel loaded locally, and as a result, permit taxation "at the pump" for international flights between the contracting parties.[6]

Following Brexit, Article 430.2 (c) of the EU–United Kingdom Trade and Cooperation Agreement explicitly permits taxation. While the agreement provides reciprocal exemptions for certain goods from being taxed, fuel is excluded from these exemptions. This agreement now governs air traffic between the United Kingdom and EU member states. It abrogates all previous bilateral ASAs between the United Kingdom and EU member states, including five ASAs concluded with COFFIS countries (Payne & Lin, 2021).[7] As an international treaty, it takes precedence over EU law, including the Energy Taxation Directive (ETD), which otherwise prohibits fuel taxation for international aviation (Opportunity Green, 2024). Accordingly, both the United Kingdom and the EU may impose fuel taxes on flights between their territories.

2.1.2 Exemptions to Aviation Fossil Fuel Taxation Based on Reciprocity

Ten ASAs contain a conditional tax exemption for fuel used in international air services, based on reciprocity between the contracting states.[8] These provisions reflect the model language recommended by the ICAO (ICAO, 2009, Article 13). In Opportunity Green (2024), Dehon and Lane analyze the phrase "on the basis of reciprocity" as it appears in Article 11 of the EU–US Air Service Agreement, concluding that its "correct interpretation … is an agreement that, if one party begins to tax another party (which it may do without violating the

[6] No legal impediment can be found in Article 6 of the ASA concluded between Switzerland and Belgium, Article 4 of the ASA concluded between the United Kingdom and Colombia, and Article 430.2 (c) of the EU–United Kingdom Trade and Cooperation Agreement.

[7] Five United Kingdom-COFFIS ASAs were abrogated through the EU–United Kingdom Trade and Cooperation Agreement, namely the ASAs concluded with Austria, Belgium, Denmark, Finland, and the Netherlands.

[8] Reciprocal tax exemptions are found in Article 5 of the ASA concluded between Austria and Colombia, Article 9 of the ASA concluded between Canada and Costa Rica, Article 8 of the ASA concluded between Canada and the EU, Article 9 of the ASA concluded between Canada and New Zealand, Article 10 of the ASA concluded between Canada and Switzerland, Article 9 of the ASA concluded between Colombia and Canada, Article 8 of the ASA concluded between Colombia and Luxembourg, Article 9 of the ASA concluded between New Zealand and Ireland, Article 8 of the ASA concluded between New Zealand and Luxembourg, and Article 11 of the ASA concluded between the United Kingdom and Canada.

agreement) then the other party may also levy such a tax." This interpretation is supported by the ordinary meaning of the term, relevant Court of Justice of the EU case law, and state practice. Thus, under these ASAs, a fuel tax may be introduced by one or more of the parties, provided reciprocity is upheld.

2.1.3 Full Tax Prohibition

Twelve ASAs explicitly prohibit the taxation of fuel taken up for international air transport within the territory of a contracting party, including for the fraction of flights passing over national territory.[9] For these agreements, the introduction of a fuel tax would require treaty amendments.

Importantly, these prohibitions do not extend to domestic aviation fuel use, even when such flights are operated by foreign carriers. Additionally, 10 of these ASAs contain exceptions for specific charges, including those levied for "services provided." This distinction suggests that cost-based charges (e.g., infrastructure or handling fees) may be permissible, even where fuel taxes are not, potentially offering an alternative mechanism with similar incentives.

2.1.4 MFN and National Treatment Provisions

Four ASAs examined do not explicitly prohibit fuel taxation but impose obligations related to non-discrimination, national treatment, and/or MFN.[10]

- Non-discrimination implies that designated airlines of one party are not treated less favourably solely on the basis of their nationality.
- National treatment requires that foreign airlines are not subject to higher fuel taxes than those imposed on national carriers for comparable services.
- MFN means that the designated airlines of one party must receive equal tax treatment as airlines from any third country.[11] For example, if third-party airlines are exempted from or face lower fuel taxes, this benefit must be extended to the other contracting party's airlines as well.

[9] Full tax prohibitions are found in Article 8 of the ASA concluded between Antigua and Barbuda, Article 11 of the ASA concluded between Belgium and Costa Rica, Article 5 of the ASA concluded between Denmark and New Zealand, Article 6 of the ASA concluded between Finland and New Zealand, Article 7 of the ASA concluded between France and Austria, Article 6 of the ASA concluded between France and Finland, Article 6 of the ASA concluded between New Zealand and France, Article 7 of the ASA concluded between New Zealand and Austria, Article 10 of the ASA concluded between New Zealand and Belgium, Article 5 of the ASA concluded between New Zealand and Spain, Article 7 of the ASA concluded between New Zealand and the United Kingdom, Article 9 of the ASA concluded between Switzerland and Costa Rica, Article 9 of the ASA concluded between Switzerland and Colombia, and Article 11 of the ASA concluded between Switzerland and the United Kingdom.

[10] Non-discrimination, national treatment, and MFN provisions are found in Article 5 of the ASA concluded between Austria and Switzerland, Article 3 of the ASA concluded between Denmark and Switzerland, Article 4 of the ASA concluded between France and Colombia, and Article 5 of the ASA concluded between Switzerland and Luxembourg.

[11] Some might argue that an MFN clause could serve as a basis for claims that aim to import more favourable provisions included in ASAs concluded with a third party like a full tax prohibition. The question of the multilateralization of more favourable standards of protection for investments through an MFN provision is subject to debate in international investment law but without precedent in the area of ASAs.

These provisions do not prohibit taxation per se but set conditions on its design and implementation.

2.1.5 Sui Generis

Three ASAs could not be definitely categorized due to their ambiguous language or lack of clear taxation provisions, and interpretations across different language versions did not yield conclusive results.[12] These agreements would require further clarification and legal review before policy changes can be pursued.

[12] Article 5 of the ASA concluded between Switzerland and Finland, Article 9 of the ASA concluded between Switzerland and New Zealand, and Article 6 of the ASA concluded between Switzerland and Spain.

3.0 Implementation Pathways for a General Aviation Fossil Fuel Tax

This section uses the findings from the COFFIS ASA analysis to outline the steps that states can take to facilitate the coordinated and effective implementation of an aviation fuel tax. Based on the analysis, the section concludes that such a tax could be introduced simultaneously by a group of first-mover states and would apply uniformly to all carriers operating international commercial air services on routes between those states. Given the complexity of reforming numerous ASAs bilaterally, a Joint Agreement offers a coordinated legal instrument to overcome these hurdles efficiently.

3.1 Evaluation of Fuel Tax Provisions

The ability of a state to impose a fuel tax depends on the provisions set out in the ASAs it has signed and that are currently in force. In some cases, the introduction of such a tax may require the amendment of individual ASAs.

As outlined in Section 2.1, ASAs that do not restrict fuel taxation—either by being silent on that matter, explicitly allowing for a fuel tax to be imposed (see Section 2.1.1), or permitting taxation under reciprocity exemptions (see Section 2.1.2)—allow for the immediate introduction of a fuel tax.

By contrast, ASAs that explicitly and fully prohibit the taxation of additional fuel uptake (see Section 2.1.3) would need to be amended before a tax can be implemented. States may pursue these amendments bilaterally or multilaterally.

ASAs that include non-discrimination, national treatment, or MFN provisions (Section 2.1.4) do not inherently prohibit fuel taxation, but may constrain how a fuel tax can be introduced, depending on the wider ASA network of the state and the interpretation of those principles:

- A state **would not violate** a non-discrimination provision if a fuel tax applied uniformly to all airlines, regardless of nationality.
- A state **would not violate** a national treatment provision if foreign and national airlines are taxed equally on international services.
- A state **could violate** an MFN provision if it imposes a fuel tax on one partner's carriers but not on those of another partner due to differing ASA obligations. For instance, a fuel tax introduced by a coalition of states would be problematic under MFN provisions if it is not matched by equivalent taxation of third-country airlines due to different terms under other ASAs (e.g., because some ASAs contain a full prohibition that has not been removed through amendment).

Therefore, a coalition of states willing to introduce a fuel tax should

1. ensure that the tax applies equally to national and partner state airlines operating on routes between those states, and
2. amend any ASAs within the coalition that contain MFN or non-discrimination provisions that could otherwise be infringed.

3.2 Bulk ASA Amendment Through a Joint Agreement

ASAs can be amended either bilaterally or multilaterally to remove legal barriers to fuel taxation. Bilateral amendments require one-on-one negotiations between states for each ASA, which can be time-consuming and politically complex.[13]

A more efficient approach involves the use of a single multilateral instrument to coordinate the amendment of multiple ASAs. This model of plurilateral reform draws inspiration from bulk treaty amendment practices in other domains of international law, such as reforms of bilateral investment[14] and double taxation treaties.[15]

The "Multilateral Instrument" (MLI) introduced by the Organisation for Economic Co-operation and Development (OECD) offers a precedent. Designed to combat tax avoidance by multilateral corporations (OECD, 2017), the MLI allows for the swift alteration of a large number of bilateral tax agreements. A similar approach could be applied to aviation through a Joint Agreement, which would operate alongside existing ASAs.

The main objective of a Joint Agreement would be to remove legal impediments to aviation fuel taxation in participating jurisdictions. It would override conflicting tax provisions in covered ASAs, enabling harmonized rules and promoting greater uniformity across agreements.

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[13] The amendment of international treaties is governed by Articles 39 and 40 of the Vienna Convention on the Law of Treaties (VCLT) (United Nations, 1969), which codifies customary international law. Twelve of COFFIS member states are party to the VCLT. According to Article 39(1), a "treaty may be amended by agreement between the parties." Article 40 of the VCLT governs amendments unless the treaty provides otherwise. In the sample of COFFIS ASAs, a vast majority contain explicit rules on treaty amendments and require either an agreement between their aeronautic authorities, which then needs to be confirmed in writing akin to diplomatic exchange, or an agreement between the parties is necessary (c.f. article 39 of the VCLT). In some instances, the entry into force of the amendment is tied to a notification that all necessary internal formalities were complied with.

[14] In 2020 member states of the European Union signed an agreement aiming to terminate around 130 intra-EU bilateral investment treaties, implementing a judgment of the European Court of Justice from 2018 (Directorate-General for Financial Stability, Financial Services, and Capital Markets Union, 2020). Further, in 2023, member states of the African Union adopted a Protocol on Investment to the Agreement Establishing the African Continental Free Trade Area, which, in Article 49, mandates the termination of almost 160 bilateral investment treaties concluded between member states within 5 years after entry into force of the protocol (Busso & Genest, 2024).

[15] In 2018 the "Multilateral Instrument" entered into force, previously envisaged by Action 15 of the OECD's measures against base erosion and profit shifting (anti-BEPS provisions). It is supported by a network of 140 countries covering around 2,500 bilateral tax treaties.

Under such a framework, treaty partners would sign a Joint Agreement and identify which ASAs are covered by it. The Joint Agreement would act as an overriding legal instrument—"sitting on top" of bilateral ASAs—and introduce alternative tax provisions.

To ensure the Joint Agreement's legal effect at the multilateral level, each party would be required to certify that all internal requirements for ASA amendment (e.g., ratification, acceptance, or approval) are complied with. A deadline for such notification—such as 18 months post-signature—could be specified to ensure timely implementation.[16]

The Joint Agreement would also include an annex listing all covered ASAs, allowing the framework to accommodate future accessions by other states.

Moreover, the Joint Agreement could include optional or binding provisions aimed at strengthening the tax regime. These could include a mandatory minimum tax level designed to level the playing field across jurisdictions and minimize market distortions, or fuel efficiency provisions by which airlines have to comply with gradually increasing fuel standards through the use of sustainable aviation fuels. Such additional provisions could be subject to periodic review and upward adjustment. The entry into force of a minimum tax could also be linked to a threshold of ratifications by a "critical mass" to ensure broad participation before the rules take effect. Such a critical mass rationale may be required to overcome a possible "prisoner's dilemma" in the introduction of a fuel tax, as individual states may hesitate to act alone out of concern that their national airlines could be placed at a competitive disadvantage.

Furthermore, countries can quantify the emissions embedded in an ASA and the revenue forgone through fuel tax breaks to identify which ASAs are most important to reform. For instance, in the example of the United Kingdom (c.f. Table 1), starting to tax flights to Europe covers 140 times more CO_2 emissions in a scenario of high passenger occupancy and covers 200 times more CO_2 emissions in a scenario of low passenger occupancy than introducing a tax for flights to Antigua and Barbuda. The emission estimate for all United Kingdom–EU flights ranges from 14.0 $MtCO_2e$ to 28.0 $MtCO_2e$, with a potential fuel tax revenue of USD USD 1,438 million to USD 2,876 million, whereas the United Kingdom–Antigua Barbuda flights estimate ranges from 0.10 $MtCO_2e$ to 0.14 $MtCO_2e$, with a potential fuel tax revenue of USD 10.0 million to USD 14.2 million.

Additionally, states should consider which journeys can effectively be covered with a low-emission alternative, such as trains, when introducing a fuel tax. In the example of the United Kingdom, most European countries can be reached by rail or road, whereas to reach Antigua and Barbuda and Canada, resorting to flights is inevitable.

[16] Compare i.e. Article 5, Base Erosion and Profit Shifting Multilateral Instrument

4.0 Legal Situation in the European Union

For EU member states, restrictions on taxing aviation fuel derive also from Article 14.1 (b) of the ETD, which imposes a full tax exemption for aviation fuel used in international aviation. The exemption, which does not extend to intra-European or domestic flights (Faber & O'Leary, 2018), leaves member states free to agree on a fuel tax for flights between their territories via a single-issue agreement.

All intra-European ASAs were abrogated in 2008 with the entry into force of Council Regulation (EC) No 1008/2008, which established common rules for aviation within the European Union. ASAs between member states and third countries remain in effect, unless replaced by a comprehensive air services agreement (CASA) concluded by the EU with that third country. In the absence of a CASA, existing bilateral ASAs have been largely aligned with EU aviation policy through so-called horizontal agreements—an EU-specific mechanism that allows all ASAs between member states and a third country to be collectively adapted to comply with EU rules without replacing the underlying bilateral framework (European Comission, n.d.-a).

Should an EU member state enter the Joint Agreement to change the tax rules of an ASA concluded with a third country, the ETD would remain as a legal impediment to international fuel taxation, effectively hindering the European member state from taxing fuel used for journeys to third countries. However, if multiple member states become party to the Joint Agreement, it could serve as a legal basis for agreeing on an intra-European tax. This is legally viable under the current ETD structure and primarily concerns flights for which alternative modes of transport exist.

Furthermore, under EU law, international agreements concluded by the Union can take precedence over secondary EU law, such as directives, when directly applicable (Opportunity Green, 2024). That means that if the EU enters an agreement with deviating tax rules with a third jurisdiction, such as through the EU–United Kingdom Trade and Cooperation Agreement, such rules can take precedence over the ETD and effectively create a leeway for a fuel tax.

The EU has entered 43 different aviation relations:

- The EU has concluded CASAs with 10 countries and has entered one Block-to-Block ASA binding nine Association of Southeast Asian Nations countries. The EU and the United Kingdom entered the EU–United Kingdom Trade and Cooperation Agreement, which conclusively governs the aviation relations between the two parties.

Of these, one imposes no restrictions on taxation,[17] and 10 ASAs exempt fuel from taxation on the basis of reciprocity.[18]

- Further, 11 neighbouring countries and the EU have entered a multilateral agreement on the European Common Aviation Area, which directly applies the ETD and its full tax prohibition.[19]
- The EU has entered into a horizontal Agreement on Certain Aspects of Air Services with 20 countries and the West African Economic and Monetary Union.[20]
- Eight countries are currently negotiating either comprehensive or horizontal ASAs with the EU.[21]

Should the EU sign a Joint Agreement to alter the tax rules in bilateral and multilateral comprehensive ASAs concluded by the Union, they would take precedence over the tax breaks embedded in the ETD and open the way to taxation for all member states mutually.

[17] Article 430.2 (c) EU–United Kingdom Trade and Cooperation Agreement.

[18] Article 9.2 (c) of EU–Qatar ASA, Article 8.2 (c) of EU–Canada ASA, Article 11.2 (c) EU–US ASA, Article 10.2 (c) EU–Armenia ASA, Article 10.2 (c) EU–Georgia ASA, Article 10.2 (c) EU–Moldova ASA, Article 23.2 (c) EU–Ukraine ASA, Article 9.2 (c) EU–Israel Euro-Mediterranean ASA, Article 9.2 (c) EU–Jordan Euro-Mediterranean ASA, Article 10.2 (c) EU–Morocco Euro-Mediterranean ASA, Article 11.2 (c) of EU–ASEAN ASA (Brunei Darussalam, Cambodia, Indonesia, Lao People's Democratic Republic, Malaysia, Myanmar, the Philippines, Singapore, Thailand, Vietnam).

[19] European Common Aviation Area signatory countries are: Albania, Bosnia Herzegovina, Bulgaria, Croatia, Iceland, Kosovo, Montenegro, North Macedonia, Norway, Romania, and Serbia.

[20] The EU has concluded horizontal ASAs with Australia, Azerbaijan, Cape Verde, Chile, Kyrgyz, India, Lebanon, Maldives, Mexico, Mongolia, Nepal, New Zealand, Pakistan, Panama, Paraguay, Sri Lanka, Switzerland, United Arab Emirates, Uruguay, and the West Africa Economic and Monetary Union (Benin, Burkina Faso, Côte d'Ivoire, Guinea-Bissau, Mali, Niger, Senegal, and Togo).

[21] Bahrain, Bangladesh Brazil, China, Japan, Kuwait, Saudi Arabia, Tunesia, and Türkiye.

5.0 Conclusions

- Neither the Chicago Convention nor ASAs create legal barriers to introducing a fuel tax for domestic aviation.
- For international air transportation, most countries already have several options to introduce a fuel tax for airlines operating under ASAs, which do not include definite legal barriers.
- To get an overview of the legal impediments present in ASAs, countries should conduct a stocktake of the fuel tax provisions included in ASAs.
- Countries bound by ASAs containing either full fuel tax prohibitions or non-discrimination provisions need to reform their ASAs to introduce taxation.
- To clarify the intent behind reciprocal fuel tax exemptions, countries may issue Memorandums of Understanding stating that these do not create a legal barrier to introducing a fuel tax.
- While bilateral reform can be achieved, a swifter way is a global or multilateral Joint Agreement that allows for the bulk reform of tax provisions present in different ASAs.
- A Joint Agreement would collectively amend all ASAs internal to the coalition to remove full prohibitions and non-discrimination, as well as national treatment and MFN provisions.
- By including a list of all ASAs covered by the Joint Agreement, the framework could easily accommodate subsequent willing states.
- A Joint Agreement could also help to coordinate policy strategies for a fuel tax at the international level, like a minimum tax level or fuel efficiency provisions, which would help to level the playing field among competing transport sectors and minimize market distortions.
- For EU member states, Article 14.1 (b) of the ETD presents a structural barrier to introducing a tax on aviation fuel for international flights, regardless of the terms in bilateral ASAs.
- Member states could explore the conclusion of bilateral or multilateral single-issue agreements limited to introducing an intra-European fuel tax, an option permissible under the current ETD framework.
- If the EU were to join the Joint Agreement and revise its comprehensive ASAs accordingly, this could give rise to a derogating tax regime. Such a regime would allow member states to apply fuel taxation on routes to partner countries, irrespective of the current tax exemption under Article 14.1 (b) of the ETD.

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Appendix A. Methodology

For this analysis, only Air Service Agreements (ASAs) signed between Coalition on Phasing Out Fossil Fuel Incentives Including Subsidies (COFFIS) member states were considered. The scope was limited to examining whether these agreements regulate the taxation of additional aviation fuel uptake, i.e., kerosene loaded at the airport of departure. The taxation of fuel already on board the aircraft upon arrival was excluded, as it is addressed under Article 24 of the Chicago Convention (also see Opportunity Green, 2024).

ASAs were selected by conducting a structured web search of publicly available documents. Particular use was made of the International Civil Aviation Organization (ICAO) website of Aeronautical Agreements and Arrangements database (DAGMAR) (ICAO, n.d.-a)—an alternative to the ICAO's World Air Services Agreements. Additional documentation was obtained from the official websites of COFFIS member states and civil aviation authorities. Public Memorandums of Understanding related to the ASAs, along with any amendments, were also considered where available. In total, 32 ASAs were collected and examined (see Appendix B). While it cannot be fully excluded that some agreements were missed, the sample is believed to approximate a near-complete census of all ASAs currently in force among COFFIS member states, except those involving the Republic of the Marshall Islands, which joined the coalition after this study was completed.

To reduce the possibility that outdated agreements were analyzed, several precautionary steps were taken:

- If multiple versions of the ASA were available, the one with the latest amendment date was selected.
- To verify consistency, bilateral ASAs and associated Memorandums of Understanding or annexes were cross-referenced.
- The date and source of the download were documented (e.g., member state ministry or official aviation authority).
- In case of doubts about an ASA's currency, corroboration was sought via official ICAO documentation or national gazettes.

In the review process, all provisions deemed potentially relevant to the taxation of additional fuel uptake were identified. These included provisions regulating charges, taxes, or customs duties applicable to the local refuelling of a foreign airline operating international air services. Provisions merely reiterating Article 24 of the Chicago Convention (i.e., the taxation of kerosene already on board upon arrival) were excluded from this analysis.

The selected ASAs are regarded as broadly representative of other ASAs, based on similarities in structure, content, and consistency of language. When available, the English-language version of the treaty was used as the basis for interpretation. In cases where no English version was available, the French, Spanish, or German version was used. Where terminological ambiguities were encountered, different language versions were compared to determine the intent of the contracting parties. Finally, the brief defines international air service as in Article 96 (b) of the Chicago Convention as "an air service which passes through the airspace over the territory of more than one State" (ICAO, 2006).

Appendix B. Coalition on Phasing Out Fossil Fuel Incentives Including Subsidies (COFFIS) Air Service Agreements

Appendix B is available here.

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