

【欧州】 【Common, 航空】

Common - EU decarbonisation policy/Aviation - Utilisation of biofuel: Reducing Scope 3 emissions: The EU's legislation, protocols for calculating GHG emissions of flights and EASA's new Environmental Labelling Scheme

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【概要 : Summary】

Scope 3 emissions as defined by the GHG Protocol include all indirect emissions that occur in a company's upstream and downstream supply chain and fall outside a company's direct operations. Scope 3 emissions also cover emissions from transporting employees for business-related activities, including air travels.

The EU's Corporate Sustainability Reporting Directive (CSRD) 2022/2464 mandates companies to report Scope 3 emissions alongside direct emissions, thereby enhancing corporate responsibility and sustainability, as Scope 3 emissions can account for about 90% of a company's total GHG emissions. Additionally, the Corporate Sustainability Due Diligence Directive (CSDDD) 2024/1760, covers Scope 1, 2, and 3 emissions and requires companies to identify, prevent, mitigate, and account for sustainability impacts in their operations and value chains.

Addressing and tackling Scope 3 emissions requires a multifaceted approach involving accurate measurement and transparent reporting. There exist various GHG emissions calculation protocols to offset CO₂ emissions from flights, which also enables companies to offset emissions

of their employees' business travels by air and other modes of transportation. Regarding business travels and the calculation of GHG emissions of flights, protocols help offsetting flight emissions, while the European Union Aviation Safety Agency (EASA) is developing an Environmental Labelling Scheme to inform about the environmental impact of flights, including business travels. The new scheme will empower passengers and also companies to make informed decisions on the selection of flights with the lowest emissions. However ultimately, real progress will come from reducing air travels, while adopting Sustainable Aviation Fuels (SAFs) and new aircraft technologies.

【記事 : Article】

1. Scope 3 emissions and the related EU legislation CSRD and CSDDD

Scope 3 emissions include all indirect GHG emissions generated outside of a company's own operations but in its value chain and can account for over 90% of a company's total GHG emissions (T&E 2022, Aligned Incentives 2024).

In 2011, the GHG Protocol, an initiative of the World Resources Institute (WRI) and the World Business Council for Sustainable Development

(WBCSD), published the “Corporate Value Chain (Scope 3) Accounting and Reporting Standard” as a calculation standard for an organization’s overall supply chain emissions (ANA n.d., GHG Protocol 2013, GHG Protocol 2013 n.d.a). The GHG Protocol divides Scope 3 emissions into 15 categories, including business travels (category 6) (PlanA n.d.). The Scope 3 Standard is the only internationally accepted method for companies to assess these emissions (GHG Protocol n.d.b).

In the EU, two pieces of legislations explicitly cover Scope 3 emissions of companies: the Corporate Sustainability Reporting Directive (CSRD) Directive (EU) 2022/2464 and the Corporate Sustainability Due Diligence Directive (CSDDD) Directive (EU) 2024/1760. The CSRD Directive (EU) 2022/2464 requires companies to report on Scope 3 emissions, including upstream and downstream impacts (Bernoville 2024, Directive (EU) 2022/2464). The CSRD Directive covers around 50,000 large companies and also certain non-EU companies, which will have to comply with CSRD by 2029 (Council of the EU 2022, Bell et.al. 2023). A company’s data on its environmental footprint will be made public (Commission Delegated Regulation (EU) 2023/2772, European Commission n.d.a).

The sustainability reporting of companies will be based on the European Sustainability Reporting Standards (ESRS) (Commission Delegated Regulation (EU) 2023/2772, European Commission 2023, European Commission 2024a). While the deadline for the Commission to adopt sector-specific ESRS was initially set at 30 June 2024, it has been postponed to 30 June 2026 (European Parliament 2024a, Directive (EU) 2024/1306). The two-year postponement for the sustainability reporting will allow companies to focus on the implementation of the first set of ESRS while giving non-EU companies more time to develop these specific sustainability standards (Council of the EU 2024a, Directive (EU) 2024/1306).

The EU’s Corporate Sustainability Due Diligence Directive (CSDDD), Directive (EU) 2024/1760, effective from 25 July 2024, requires companies to identify, prevent, mitigate, and account for adverse sustainability impacts in their value chains (Directive (EU) 2024/1760, European Commission n.d.b). The CSDDD Directive (EU) 2024/1760 requires EU and non-EU companies and parent companies with over 1000 employees, covering activities from upstream production to downstream distribution and transport to conduct due diligence on the potential and actual impacts across Scopes 1, 2 and 3 emissions in their global value chains (European Parliament 2024b, Council of the EU 2024b).

2. The calculation of business travels Scope 3 emissions

In the GHG Protocol’s guidance, the business travels are covered in category 6 of Scope 3 emissions, including the emission from the transportation of employees for business-related activities in vehicles owned or operated by third parties, such as aircraft, trains, buses, and passenger cars (GHG Protocol 2013). Emissions from transportation in vehicles owned or controlled by the reporting company are accounted for in either Scope 1 (for fuel use), or in the case of electric vehicles, Scope 2 (for electricity use) (GHG Protocol 2013). Emissions from leased vehicles operated by the reporting company not included in Scope 1 or Scope 2 are accounted for in Scope 3, category 8 (Upstream leased assets) (GHG Protocol 2013).

Emissions from business travel in Scope 3 may arise from air travel, rail travel, bus travel, automobile travel (e.g., business travel in rental cars or employee-owned vehicles other than employee commuting to and from work) and other modes of travel (GHG Protocol 2013).

Regarding the calculation of emissions from business travel, companies may use the Distance-based method, the Spend-based method or the Fuel-

based method to calculate Scope 3 emissions from business travel (GHG Protocol 2013).

Regarding flights, short-haul flights have higher emission factors due to strong influence of the landing/take off cycle on emissions, whereas long-haul flights have slightly higher emissions than medium-haul flights due to the additional weight of fuel (GHG Protocol 2013).

3. Some protocols for calculating GHG emissions of flights used in Europe

Several GHG emissions calculation protocols have been developed by governments or institutions, offsetting companies, or other organisations such as NGOs and foundations, offering compensation options to organizations, companies and individuals to offset CO₂ emissions from their business flights or cargo loads. These protocols help companies align their operations in a climate-friendly and transparent manner (Myclimate n.d.a). However, the lack of standardization and the complexity of physical, chemical processes, and non-CO₂ effects of flights cause variabilities in their environmental assessment (Iken/Aguessy 2022).

Iken and Aguessy compared six flight CO₂ assessment protocols including ICAO, myclimate, atmosfair, the UK DBEIS's Greenhouse Gas Conversion factors, the French DGAC's TARMAAC, and ADEME's Base Carbone® (Iken/Aguessy 2022). The ICAO's on-line carbon calculator is widely used, also by the global distribution system (GDS) AMADEUS (Iken/Aguessy 2022). The Swiss carbon offsetting foundation's myclimate calculator, used by Lufthansa among others, offers various opportunities for sustainable air travel (Iken/Aguessy 2022, myclimate n.d.b).

The German NGO atmosfair provides a detailed GHG calculation tool and also proposes business solutions (Iken/Aguessy 2022). The UK's Department for Business, Energy, and Industrial Strategy (DBEIS) offers emission factors for business reporting, applied in various policies

(Iken/Aguessy 2022). The French Department for civil aviation (DGAC)'s TARMAAC calculator, co-developed with the French centre for the study of atmospheric pollution (CITEPA) is also used for assessments (Iken/Aguessy 2022). Moreover, besides this non-exhaustive list of GHG emissions calculation protocols, airlines like Air France and SAS have developed their own methodologies, with Air France's methodology being based on IATA guidelines (Air France 2023). Some protocols, like myclimate and atmosfair, specify flight class and aircraft type, while others, like ADEME and DBEIS, use distance categories (Iken/Aguessy 2022). However, there is no international standard for distance categories, and non-CO₂ effects are not always considered (Iken/Aguessy 2022).

Concluding, it must be underlined that the protocols' environmental assessment entails many methodological choices and if the purpose is carbon offsetting, myclimate and atmosfair methods seem to be more relevant and suitable than other protocols (Iken/Aguessy 2022).

4. The EU mandate for SAFs and EASA's flight emissions labelling Scheme

To reduce Scope 3 emissions of business travels by plane, companies need to calculate the carbon footprint from those business travels and set measurable targets. There exist several solutions like flying less, flying smarter and using flights on aircraft using Sustainable Aviation Fuel (SAF) (Skynrg n.d.).

Flying less would have a positive impact and therefore the company needs to consider the necessity of a business trip, encouraging video conferencing (Skynrg n.d.). If flying is inevitable, the company needs to look for more sustainable ways of flying, like choosing direct flights and economy class to reduce the carbon footprint of a business flight (Skynrg n.d.). The introduction and use of SAF will significantly reduce the GHG emissions of the

aviation sector in general and it will also help to reduce Scope 3 emissions of business travels. On average, the use of SAF can reduce CO₂ emissions by 80% compared to traditional jet fuel (Airbus 2024).

A company can offset the flight emissions of business travels by purchasing high quality carbon credits through trusted offsetting programs (Skynrg n.d.). For example, ANA receives and issues SAF manufacturer's CO₂ reduction certificates to participating companies (ANA n.d.).

In the EU, in line with the revised renewables directive (Directive (EU) 2023/2413), the EU's ReFuelEU Aviation Regulation (EU) 2023/2405 defines SAF and mandates SAF blending, starting at 2% in 2025 and reaching 70% by 2050 (Regulation (EU) 2023/2405). In parallel, the share of synthetic aviation fuels will have to increase from 1.2% in 2030 to 35% in 2050 (Regulation (EU) 2023/2405). The ReFuelEU Aviation rules are expected to help cutting CO₂ emissions by over 60% by 2050 compared to 1990 levels (Regulation (EU) 2023/2405).

The ReFuelEU Aviation Regulation also includes the task to introduce an Environmental Labelling Scheme to provide potential passengers with clear environmental performance information for flights (EASA 2024a). In 2019, a survey by the European Aviation Safety Agency (EASA) revealed that 80% of respondents wanted environmental information for flights, with 75% supporting an Environmental Label (EASA n.d.).

Therefore, currently, EASA is developing a Flight Emissions Label as an environmental labelling scheme using a comprehensive methodology for calculating emissions based on real operational data, including aircraft type, passenger count, freight volume, aviation fuel consumption, and life cycle emissions, providing passengers with transparent and accurate data about the environmental impact of their flights (EASA n.d.). Set to launch in early 2025, this

Voluntary Flight Emissions Label aims to enable citizens to make informed choices when comparing between different flight options (EASA n.d.). This label aligns with the CountEmissions EU initiative on the accounting of GHG emissions of transport services (COM(2023) 441 final).

For airlines, a participation in the Environmental Labelling Scheme will create a fair competition framework, highlighting airlines' sustainability efforts and offering a competitive advantage (EASA 2024a). Participation is voluntary, requiring airlines to display emissions data in their booking systems (EASA 2024a). This enables passengers to make sustainable choices based on trusted, neutral information and could foster sector-wide improvements in fuel and technology (EASA n.d.).

5. Conclusion and considerations

Scope 3 emissions are generated outside of a company's own operations but within its value chain. They are typically difficult to measure, but it is crucial to reduce these Scope 3 emissions as they can account for more than 90% of a company's total GHG emissions.

In the EU, the CSRD Directive (EU) 2022/2464 mandates companies to report Scope 3 emissions along with direct and indirect emissions. The CSDDD Directive (EU) 2024/1760 requires companies to address sustainability impacts across their value chains, and to conduct due diligence on the potential and actual impacts across Scopes 1, 2 and 3 emissions throughout their global value chains.

Based on the GHG Protocol's 15 categories of Scope 3 emissions, including emissions of business travel, companies can calculate these emissions of business flights by choosing a GHG emissions calculation protocol to calculate and offset those CO₂ emissions. There exist several GHG emission calculation protocols and the protocols myclimate and atmosfair are considered being most suitable for offsetting flight

emissions. EASA's new Environmental Labelling Scheme is intended to give passengers a tool to choose the least carbon intense flights and to then offset CO₂ emissions through programs like atmosfair or myclimate. This could also help to reduce a company's Scope 3 emissions from business travels by air, as they would get the information on the least GHG emitting flights. However, minimizing business trips and improving aviation sector practices through the use of SAFs as well as the development of advanced technologies for aircraft are crucial measures for significantly reducing GHG emissions from air travel.

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